



LISBON
**SCHOOL OF
ECONOMICS &
MANAGEMENT**
UNIVERSIDADE DE LISBOA

MASTER OF SCIENCE IN
FINANCE

MASTERS FINAL WORK
PROJECT

EQUITY RESEARCH:
DAIMLER GROUP

FRANCISCO DE JESUS MARCOS

SUPERVISOR:
INÊS MARIA GALVÃO TELES FERREIRA DA FONSECA PINTO

NOVEMBER 2020

ABSTRACT

Daimler AG is a centenary German automotive company with a wide portfolio of products and services, provided from its three subsidiaries - Mercedes-Benz Cars and Vans, Daimler Trucks AG and Daimler Mobility AG. The Group follows a solid and well-structured strategy focused on its customers, which allowed the company to remain at the forefront since its existence, with a worldwide presence and a strong market reputation. In 2019, Daimler AG sold more than 3.35 million units, presenting a 3.7% market share.

The reason why Daimler AG was the company chosen, is due to my passion and interest for the automotive industry and, especially, for the excellent work developed by the Group throughout all these years.

The structure of this project follows the CFA Institute recommendations and aims to estimate the fair value of a Daimler AG share at 2020 year end, concluding with a buy, hold or sell recommendation. To achieve this conclusion, the valuation methods carried out were the Discounted Cash-Flow (DCF), the Adjusted Present Value (APV), the Relative Valuation and the Dividend Discount Model (DDM).

Based on the Discounted Cash-Flow, the Adjusted Present Value and the Relative valuation, it were obtained target prices above the closed stock price on September, 19th, of 45.5€. For the Dividend Discount Model, the conclusions were not considered relevant, since the payment of dividends will be severely affect in the following years, as result of the financial crisis caused by the global pandemic that proliferated in 2020.

After the analysis and valuations made on Daimler AG, it was considered a medium risk investment, with a final buy recommendation and an upside potential of 26% for the 2020 year end Daimler share.

JEL classification: G10; G30; G32; G34.

Keywords: Daimler AG; Equity Research; Price Target; Discounted Cash-Flow method; Adjusted Present Value method; Relative Valuation; Dividend Discount Model.

RESUMO

Daimler AG é uma empresa alemã centenária, que apresenta um vasto portefólio de produtos e serviços, provenientes das suas três subsidiárias - *Mercedes-Benz Cars and Vans*, *Daimler Trucks AG* e *Daimler Mobility AG*. O Grupo segue uma sólida e bem estruturada estratégia focada nos seus consumidores, que permitiu à empresa manter-se na vanguarda desde a sua existência, com uma presença mundial e uma forte reputação no mercado. Em 2019, a Daimler AG vendeu mais de 3.35 milhões de unidades, apresentando uma quota de mercado de 3.7%.

A razão pela qual a Daimler AG foi a empresa escolhida deve-se à minha paixão e interesse pela indústria automóvel e, especialmente, pelo excelente trabalho desenvolvido pelo Grupo ao longo destes anos.

A estrutura deste projeto baseia-se nas recomendações do *CFA Institute* e tem como objetivo estimar o valor da ação da Daimler AG no final de 2020, concluindo com uma recomendação de compra, venda ou de manter a ação. Para chegar a esta conclusão, os métodos utilizados foram o *Discounted Cash-Flow* (DCF), o *Adjusted Present Value* (APV), o *Relative Valuation* e o *Dividend Discount Model* (DDM).

Com base no *Discounted Cash-Flow*, no *Adjusted Present Value* e no *Relative valuation*, foram obtidos preços-alvo superiores ao preço de fecho da ação a 19 de Setembro, de 45.5€. Para o *Dividend Discount Model*, as conclusões não foram consideradas relevantes, visto que o pagamento de dividendos irá ser severamente afetado nos próximos anos, como resultado da crise financeira causada pela proliferação pandémica mundial em 2020.

Após estas análises e avaliações feitas da Daimler AG, foi considerado um investimento de risco médio, com uma recomendação final de compra e um potencial de aumento de 26% para a ação da Daimler no final de 2020.

Classificação JEL: G10; G30; G32; G34.

Palavras-Chave: Daimler AG; Equity Research; Price Target; Discounted Cash-Flow method; Adjusted Present Value method; Relative Valuation; Dividend Discount Model.

ACKNOWLEDGEMENTS

This project is the culmination of two fantastic years, where I learned a lot and grew as a person. I can now say, with all confidence, that I am ready to embrace any professional challenge that arises and overcome the most diverse obstacles during my professional career.

I want to thank my supervisor, Inês Pinto, for all the support, encourage and lessons throughout the development of this Equity Research.

A special thanks to my family for the opportunity to complete my studies at this renowned institute and to my girlfriend, Beatriz Ferraria, for all the motivation and strength gave that allowed me to conclude this stage with the desired success.

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INDUSTRY	TICKER	MOOD'S RATING	LAST PRICE	TARGET PRICE	MEDIUM RISK
Auto & Truck	DAI	A3	45.48€	57.14€	Upside Potential: 26%
Manufacturers	XETRA	31.12.2019	19.09.2020	31.12.2020	31.12.2020

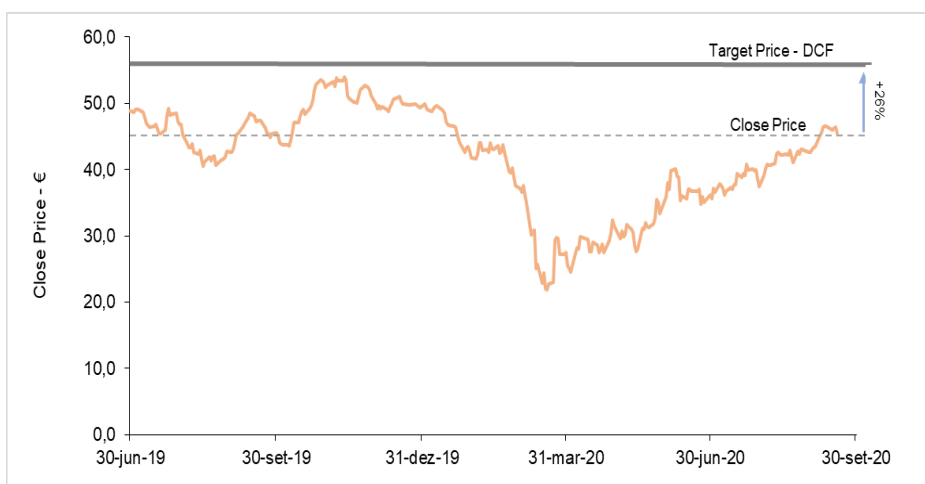
1. RESEARCH SNAPSHOT

DAIMLER

BUY

Recommendation

The final recommendation for Daimler AG stands for **BUY**, with a target price of **57.14€** for 2020YE, in comparison with the last closing price recorded on September 19th, 2020 of 45.48€, leading to an upside potential of **25.64%** - "medium risk". The target price referred was calculated using the Discounted Cash-Flow (DCF) model. The adjusted present value (APV) method was also used, indicating an upside potential of 16%, reaching a target price of 52.90€, significantly lower than the one obtained with the DCF model. Besides these two methods, multiples valuation method was also used, giving truthfulness to the conclusion drawn in the DCF and APV methods, that is, an upside potential of 25.6%, therefore maintaining the BUY recommendation and an associated "medium risk" level. The DDM was also carried out, however the price obtained does not meet the conclusions drawn in the other three valuation methods, since it is expected a significant drop in the total dividends distributed annually for the following years. For that reason, the conclusion of this method was not relevant in the referred recommendation.



The year of 2020 has been a very unusual year due to the COVID-19 pandemic, which lead to a huge break in the Group's normal function, not only for Daimler, but for the entire world economy. For this reason, for 2020YE, it is expected a significant drop of almost 30% in Daimler's revenues, due to the predicted decrease of almost 35% in the number of units sold.

This plummet in the Group's revenues will influence the amount of investment that was schedule by Daimler for the current year. In the previous years, the Group has maintained an annual investment of around 6% of its revenue, being that, for 2020, Daimler was expecting to increase its CapEx, keeping the 6% factor, since it was forecasted a rise in its sales. The main target of this investment is the production of electric cars. Therefore, Daimler plans to postpone the planned investment in electric vehicles, expecting to reduce its CapEx by almost 30% in 2020, compared to the amount invested in 2019. This reduction in CapEx will delay the development of new electric models by Daimler.

Despite this high decrease in Daimler's revenues, the Group expects to obtain a net income similar to that of 2019, due to a better cost management and considering the huge investment made in 2019 of more than 3 000€ millions in the reorganization of its internal structure ("Project Future").

Regardless of the crisis that was felt during 2020, Daimler will maintain its high recognition in the automotive sector in general, seeking to launch new projects, among which stand out the successor generation of the current C-Class and the product ramp-up of the new GLE sports utility vehicles.

Table 1. Risk assessment

Low	Medium	High
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Table 2. Daimler AG market data - 19/09/2020

Ticker Symbol	DAI
Ticker Symbol Bloomberg	DAI:GR
Ticker Symbol Reuters	DAIGn.DE
Stock Exchange	Frankfurt
% in DAX 30 (2019)	3.95%
% in Euro Stoxx 50 (2019)	1.55%
Type	Common Shares
Country	Germany
Sector	Automobile
Closing Price	45.48€
High	46.37€
Low	45.48€
52W Price Range	21.02€ - 54.50€
Volume	2 893 007
Shares Outstanding	1 069 837 447
Market Cap	48 656€ million
Dividend (2019)	0.90
Dividend yield	1.82%
P/E	22.20
Profit per share	2.22

Source: Thomson Reuters

Table 3. Valuation methods used and results obtained

Valuation	Target Price 2020YE	Upside/Downside Potential
DCF	57.14	25.64%
APV	52.90	16.31%
Multiples	57.14	25.64%
DDM	24.36	-46.43%

Source: Author

Table 4. Daimler's key drivers

(in million €)	2019	2020F
Revenues	172.745	129.335
EBIT	4.313	6.901
Net Income	2.709	4.672
Total Assets	302.438	313.171
Total Liabilities	239.597	255.931
Total Equity	62.841	57.240
Net Debt	-133.663	-146.699
Interest Expenses	-3.550	-3.463
CapEx	10.835	7.637

Source: Company Data, Author

COMPANY PROFILE

Daimler AG, a German company with headquarters in Stuttgart, is the world's largest manufacturer of commercial vehicles and one of the biggest producers of premium cars¹. Founded in 1886 by Gottlieb Daimler and Carl Benz, the group only assumed the name Daimler AG after the sale of Chrysler to a private equity in 2007. Daimler AG is a group compounded by Mercedes-Benz Cars & Vans, Daimler Trucks & Buses and Daimler Mobility divisions, being Mercedes-Benz Cars & Vans well-known by the production of the Mercedes brand, one of the most common brands worldwide. Daimler AG manufactures automobiles, trucks, vans, busses and offers financing, leasing, fleet management, investments, credit card and insurance brokerage as well as innovative mobility services through the subsidiary of the group, Daimler Mobility. The Group has production facilities in Europe, America, Asia and Africa, being a very renowned and competitive automotive brand, always seeking for additional growth opportunities.

Daimler AG did an Initial Public Offering on January 1st of 1990, being listed in the Frankfurt stock exchange since then. In the beginning of November 2019, Daimler launched a new corporate structure due to the separation of the car and van and the truck and bus businesses which provided the entry of two subsidiaries of Daimler AG in the commercial register. Therefore, Daimler AG is now responsible for three subsidiaries: Mercedes-Benz AG that is responsible for Mercedes-Benz Cars & Vans; All Daimler Trucks & Buses activities are conducted at Daimler Truck AG; and, Daimler Mobility AG. On December 31, 2019, the Daimler Group employed a total of 298 655 employees, less 28 employees than the previous year (2018: 298 683). This reduction in the number of employees occurred due to the implementation of the "Project Future", which was approved by the 2019 Annual Shareholders' Meeting. This project consists of the separation of the divisions Mercedes-Benz Cars, Mercedes-Benz Vans, Daimler Trucks and Daimler Buses from Daimler AG establishing two legally independent units known as Mercedes-Benz AG and Daimler Truck AG.

Regarding business aspects, Daimler sold a total of 3.34 million vehicles in 2019 (2018: 3.35 million), being Daimler Trucks the only subsidiary that recorded a decrease (-5.57%) on the units sold compared to the previous year. This decrease it is mainly due to the reduction of sales (-16.63%) of Auman Trucks – a truck that results from the joint venture with Beijing Foton Daimler Automotive Co. in China.

Mercedes-Benz Car, the Group's commercial cars producer, kept its position as a leader premium brand, registering a smaller increase (0.11%) in the number of cars sold, compared with the increase of 0.40% on the previous year (2018). The increase in sales was affected by the complete changeover of the smart to all-electric drive and, also, due to the gradually reduce throughout the year of the number of cars with combustion engines offered.

Mercedes-Benz Vans had an increase of 4.03%, mainly due to the new approach for commercial customers with the Vito, Citan and Sprinter models, with the latter registering the largest increase in the company.

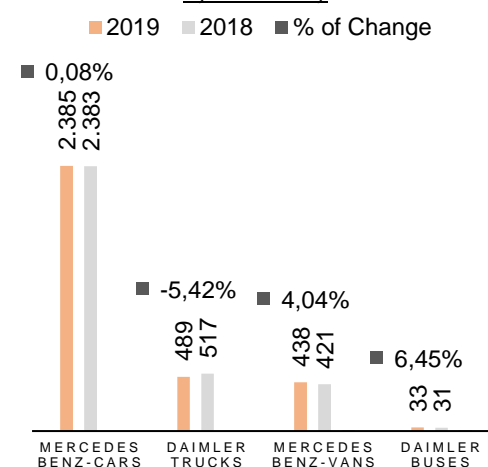
Daimler Buses witnessed an increase of 5.58%, registering the highest growth of the group, especially because the noticeable recovery of the market in Brazil and substantial sales growth in Argentina.

Table 5. Daimler's general information

Group Name	Daimler AG
Headquarters	Stuttgart
Year of Foundation	1886
Manufactures	Automobilbe, trucks, vans and busses
Services	Financing, leasing, fleet, management, investment and innovative mobility
IPO	32874
Listed on	Frankfurt Stock Exchange
# of Employees (2019)	298.655
Units Sold (2019)	3.34 million
Revenues (2019)	127.7€ billion

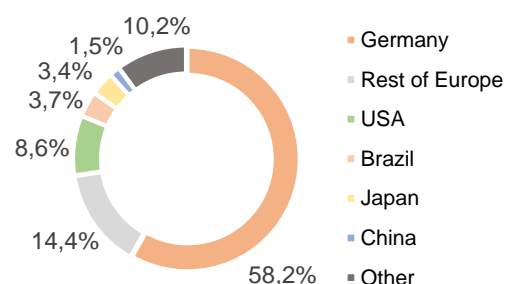
Source: Company Data, Author

Graph 1. Number of units sold (in thousands) by Subsidiary



Source: Company Data, Author

Graph 2. Number of employees by region



Source: Company Data, Author

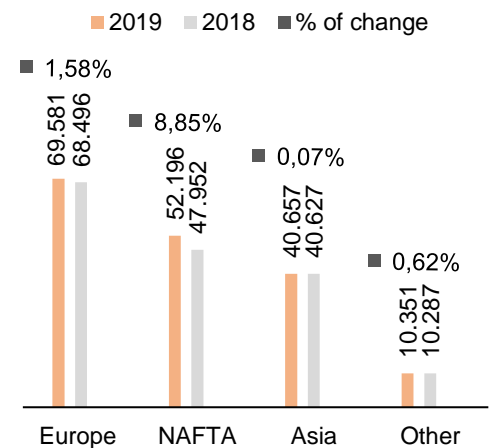
¹ Premium cars are mass produced and, generally, have more features than the luxury segment. Premium cars can be purchased by the upper-middle class (50k - 150k). Luxury cars focus more on the engine power and luxury features, so they have higher prices (> 150k). Daimler AG produces both types of segments.

Daimler's revenues, for 2019YE, were 172.7€ billion, 3.17% higher than the previous year (2018YE: 167.4€ billion). This development was mainly because of a stronger pricing for new vehicles at Daimler Trucks and a significantly growth in contract volume at Daimler Mobility. Considering each division, Mercedes-Benz Vans and Daimler Mobility obtained the highest increases, with values around 9%, followed by Daimler Trucks and Daimler Buses, with 5% each and, finally, Mercedes-Benz cars recorded the lowest increase (1%). NAFTA registered the highest increase on revenues (9%), reaching 52€ billion in 2019YE (2018YE: 48€ billion). Despite this increase, Europe maintains as the region with the highest contribution in terms of revenue, getting 69.5€ billion in 2019YE, an increase of 2% compared with the previous year. Asia was the only region that maintained the same level of revenues of 2018YE (2019YE: 40.6€ billion). This fact can be explained by the decrease of revenues observed in China, due to the loss of momentum lived in the economy growth of the country, as a result of a weakening of both domestic and export demand.

SHAREHOLDER STRUCTURE

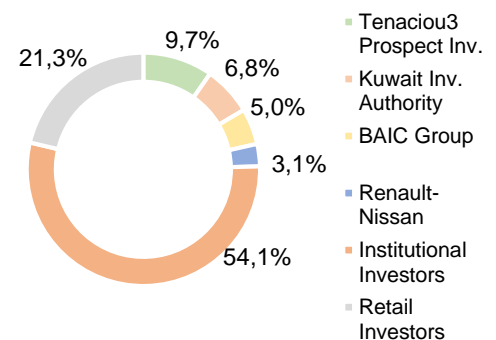
Daimler AG maintains a broad shareholder's base with around the same number as the previous year (2018), 1.0 million shareholders. Since February of 2018, Tenacious3 Prospect Investment Limited became Daimler AG's largest individual shareholder, owning 9.7% of the company shares. Daimler AG's second-largest single shareholder is Kuwait Investment Authority (KIA), which currently owns 6.8% of the company's stock. In July 2019, Chinese BAIC Group assumed as the third-largest single shareholder of Daimler AG, with approximately 5% of Daimler's equity capital, surpassing the current fourth-largest single shareholder, Renault-Nissan Alliance, which owns 3.1% of Daimler's shares. Daimler AG closed the year of 2019 with a Market Capitalization of 52.8€ billion, represented by its 1,069.8 shares outstanding. Market Capitalization increased 7.54% from 2018YE (49.1€ billion) until 2019YE. Remuneration Report describes the Board of Management remuneration, which decomposes this remuneration in three segments: the base salary, the annual bonus, which represents the short and medium term variable remuneration based on the accomplishment of several objectives previously defined and, finally, a long-term variable remuneration (PPSP), which suits as an incentive for the fulfillment of future objectives.

Graph 3. Revenues (in million €) by region



Source: Company Data, Author

Graph 4. Daimler's shareholders structure



Source: Company Data, Author

3. COMPANY STRATEGIES

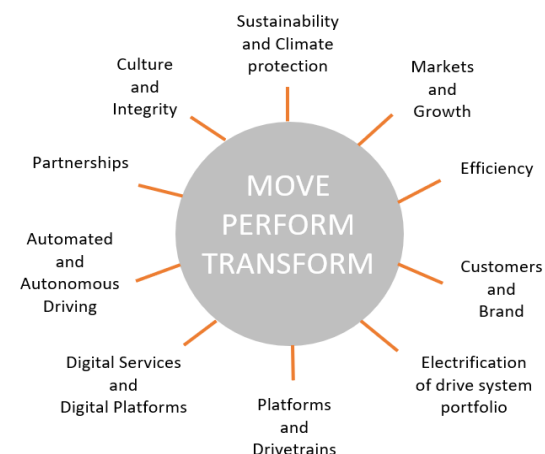
DAIMLER

COMPANY OBJECTIVES

The search for an increasingly sustainable world is the main objective of large companies worldwide, and Daimler intends to have this aware at its core business. To achieve that, Daimler AG pretends to re-create mobility standards to be more eco-friendly, through the implementation of electric drive systems and continue pursue of automated and autonomous driving and mobility services. This is the biggest transformation that Daimler seeks to achieve, based in a structured and challenging strategy called "Ambition 2019" that plans to work towards offering CO2-neutral mobility over the next 20 years. To support this strategy, Daimler established several short-term objectives/strategies, which contributes for the 3 main essential components to reach the desired end:

Reinvent the invention – MOVE – which pretends to reinvent mobility, by creating more sustainable solutions of transportation of people and/or goods in the future, maintaining the harmonious luxury that customers are used to seeing by Daimler. Innovating is one of the biggest contributions to this cause, developing highly efficient vehicles and be able to offer automated driving and digital services.

Figure 1. Daimler's strategies



Source: Company Data, Author

Create sustainable value – **PERFORM** – focusing on profitability targets and the maintenance of solid cash flows, while providing fascinating vehicles to Daimler’s costumers. These facts, aligned with the developing of new technologies alongside with Daimler’s partners, will allow to expand the, already, leadership position in all sectors worldwide.

Reinvent the company in the long-term – **TRANSFORM** – through the implementation of new processes that will lead to a necessary development of skills by Daimler’s employees, creating a workforce capable of face off new requirements. This process of innovation is well-defined and consists in a program called “Leadership 2020”.

“**Leadership 2020**” is also one of the strategies that Daimler pretends to implement in the short-term, aiming a more agile and flexible workforce. “Leadership 2020” pretends to determine some standards based on four corporate values: integrity, respect, passion and discipline. Having in mind these four pillars, Daimler seek to achieve an honest and open feedback culture, enabling the creation of a stronger and faster workforce focused on profit-making ideas.

To achieve its sustainable goals, it is require a future-oriented cooperation with Daimler’s partners in industry, government, and society at large, as well with its employees – following the principles of the corporate value “integrity”. In addition to this, and while formulating its future strategic sustainability objectives, Daimler focused extensively on the 17 Sustainable Development Goals (SDGs)² defined by the United Nations, and in particular on the following SDGs and the associated sustainability related activities: SDG 8 – Decent Work and Economic Growth; SDG 9 – Industry, Innovation and Infrastructure; SDG 11 – Sustainable Cities and Communities; SDG 12 – Responsible Consumption and Production; and, SDG 13 – Climate Action. These SDGs are now a crucial component of Daimler’s business strategy.

Figure 2. “Leadership 2020” principles



Source: Company Data, Author

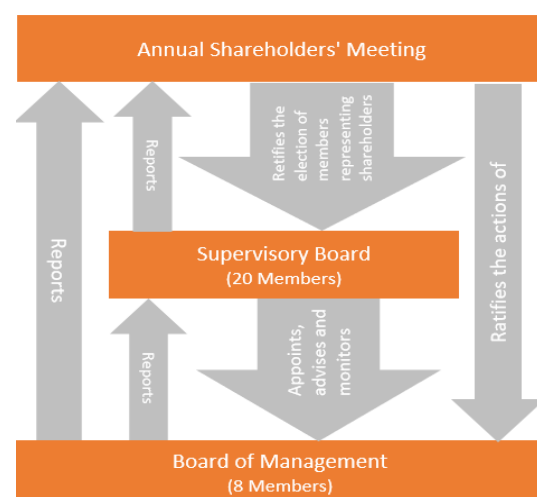
4. GOVERNANCE STRUCTURE

DAIMLER

CORPORATE GOVERNANCE

The success of Daimler Group comes, especially, from a very structured, coordinated and objective Governance Structure, which is constitute essentially by the Board of Management and the Supervisory Board. The Board of Management, represented by 8 members, is responsible for manage Daimler Group, mainly, through the determination of corporate goals and decisions concerning operational planning matters that will meet the Group’s strategic focus. The Board is also responsible for prepare several reports, such as the consolidated interim reports, the annual company financial statements of Daimler AG, the annual consolidated financial statements, and the combined management report of the Company and the Group, as well as the separate combined non-financial report produced for Daimler AG and the Group. In May of 2019, Dieter Zetsche, former CEO of Daimler AG and Head of Mercedes-Benz Cars, resigned after 13 years exercising this position, having, on the same date, Ola Källenius assumed as the Chairman of the Board of Management and responsible for Mercedes-Benz Cars, for a new period of five years. Dieter Zetsche is fulfilling a two year cooling-off period³, being that, after this period, the Supervisory Board intends to nominate Dieter Zetsche for election to the Supervisory Board at the Annual Meeting 2021. In the past 100 years, Daimler has had 12 CEOs, showing the low turnover that exists in this position.

Figure 3. Daimler's governance structure



Source: Company Data

² These 17 Goals were adopted by all UN Member States in 2015, as part of the 2030 Agenda for Sustainable Development, in which the main objectives are: end poverty, protect the planet and improve the lives and prospects of everyone, everywhere.

³ A period of time during with the parts involves reconsider their options before taking any further action.

The Board of Management must report to the Supervisory Board about the strategy of the business units, corporate planning, revenue development, profitability, business development and the situation of the Group, as well as on the internal control system, the risk management system, and the compliance management system. Supervisory Board, which is constitute by 20 members, in accordance with the *German Codetermination Act*, monitors and advises the Board of Management about the subjects mentioned above, decides on the system of remuneration for the Board of Management and reviews the company annual financial statements as well. Of these 20 members, half of them are elected by the shareholders, at the Shareholders' Meeting, and the other half comprises members who are elected by the Group's employees who work in Germany. Even B.M.W. and Volkswagen, two automotive German companies and two of Daimler's main competitors, have 20 members in the Supervisory Board, since all are in accordance with the *German Codetermination Act*.

This transparent and responsible Corporate Governance, along with the focus of Daimler on promoting greater integrity and compliance daily, allows Daimler to keep succeeding and increase its consumer's loyalty.

INTEGRITY CODE

For Daimler, integrity means doing the right things always meeting the values of the Group. Revised in 2019, Integrity Code of Daimler pretends to define the central corporate principles in order to provide guidelines on its daily business conduct, offering employees orientation, and helping them making the right decisions even in difficult business situations. The pursuit for a better, oriented and responsible workforce remains as the main task of this Code, oriented by the Integrity Management team. Promote ethical conducts, provide a global employee survey on integrity and compliance and develop efficient training methods are the non-financial approaches that will ensure integrity, reducing legal risks and protecting the company's reputation.

COMPLIANCE MANAGEMENT SYSTEM (CMS)

Compliance Management System (CMS) pretends to ensure that all Daimler's employees worldwide carry out their work in accordance with laws and regulations, preventing inappropriate behavior. CMS consists of basic principles and measures, in order to implement several activities that focus on promote and maintain a fair market competition, leading employees to produce based on technical and regulatory stipulation, enhance human rights and seeking to prevent money laundering. To guarantee that it happens, Daimler has a whistleblower system BPO (Business Practices Office), where each employee, around the world, can submit an anonymous special form where it is reported any misconducted or violation that could compromise or bring a high risk to the company and its employees.

Corruption and violations of Anti-Money Laundering regulations have a special attention from Daimler, not only because the Group contains a financial institution, but also due to the high reputation of Daimler in the market, that can be highly affected if it is proved that it caused a financial crime.

Figure 4. Daimler's Compliance Management System



Source: Company Data

THE WORLD ECONOMY

Since the financial crisis period in 2009, global GDP growth rate increased by an average of almost 3% until 2019 and, during this period, the peak was reached in the year following the financial crisis (2010), with a growth rate of 4.3%. According to Statista Mobility Market Outlook 2019, passenger cars revenues summed 1 647 billion euros worldwide in 2019YE, showing that the automotive industry has a huge value in the world economy.

Even considering the global GDP growth in 2019, the maintenance of private consumption level and the increase in the number of units sold presented by Daimler, year after year, the automotive industry suffered a fall of 4.9% in the number of cars sold, in 2019, to 74.94 million units. This plummet is mainly due to the trade conflict between U.S. and China, which has influenced the exports and domestic consumption of these goods in both countries. The world economy was really affected in 2019, leading to a contraction of the global car market by approximately 5%, and it is expected to fall in 2020 and in the following years. This fall is mainly because of the concretization of the withdrawal of the UK from the European Union (Brexit) and, especially, the outbreak of the global pandemic COVID-19. In this context, Daimler will have to face several difficulties, while trying to fulfill the planned objectives regarding the development of electric engines and autonomous driving.

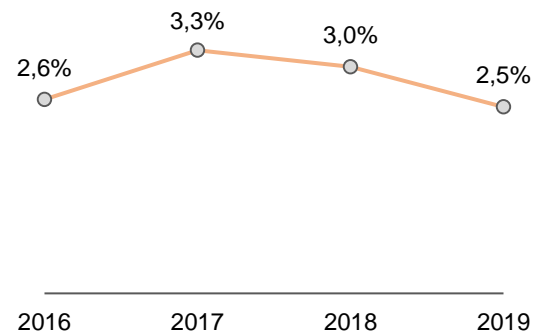
EUROPE

For 2019, in Europe, new car sales remained above 18 million units, achieving a global market share of 24.2%. This European slowdown is related to the severe crisis that is affecting Turkey, which implied a strong contraction of the Turkish domestic demand of -20.4% in 2019. Ukraine (+17.6%), Kazakhstan and Belarus registered strong performances and Russia (-2.7%), that presented a big recovery in the last few years, saw its economic growth drop significantly due to the loss of about 12% in the ruble relative value in 2019. The EU market remained flat in 2018 and 2019, since EU continued without significant impacts that could result from the official implementation of Brexit, and the no-deal Brexit it was just a speculation at the time. Considering currency exchange rates, both euro and British pound were weaker at the end of 2019 comparing to the same period in 2018.

Since Daimler is a German company and Germany is responsible for the major portion of revenues generated in Europe for the Group, it is important to understand the impact that socio-economic changes in this country can bring to Daimler, as well as the rest of the sector. In 2019, German auto output registered the lowest level of production since 1997, with 4.7 million cars built. The 22-year low has as major responsible the trade conflict between U.S. and China, the biggest two exporters, and by the technological change and tighter emissions restrictions that complicated life of carmakers. German auto production it was not the only drop recorded last year, since the number of auto exports from Germany to the rest of the world fell even more sharply than production, tumbling 13% to 3.5 million. Besides that, domestic consumption increased, since the number of new car registrations booked an increase of 5%, to 3.6 million.

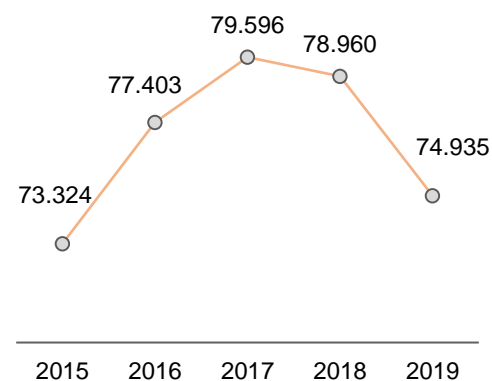
Regarding United Kingdom (UK), UK's economy records a huge presence of the automotive industry, generating 12% of total exports and employing over 800 000 people. In 2019, more than 81% of the UK's passenger car output was exporting, and, in the same year, 62.8% of the engines manufactured were made in UK. The massive need for exchange between UK and EU is notorious, since EU remains by far the UK's largest trading partner. According to a study conducted by IHS Automotive, Brexit will cost to vehicle manufacturers more than 2.8 million sales in the first two years after the break. However, only on 31st of January 2020 United Kingdom left officially the

Graph 5. GDP growth rate



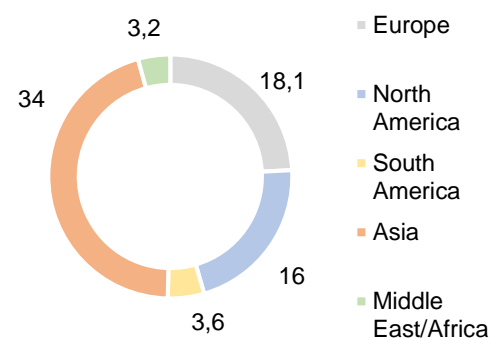
Source: World Bank, Author

Graph 6. World passenger car registrations (in thousands)



Source: ACEA, Author

Graph 7. New passenger car registrations (in millions) in 2019 by region



Source: ACEA, Author

European Union, stilling early enough to be able to assess the impact that this withdrawal will have for both.

Most recently, according with European Automobile Manufacturers Association (ACEA), the exponential spread of the virus COVID-19 caused an abrupt drop (-25.6%) in the number of passenger car registrations in the first quarter of 2020, compared to the same period in the previous year. March registered the highest drop of this period, -55.1%, representing the possible peak of the pandemic. Italy recorded a dramatic falling, with -35.5%, following by France, -34.1%, Spain -31% and Germany -20.3%. Even though Germany had the lowest fall in the countries mentioned, it reached the peak of the pandemic later, so the biggest consequences could be witnessed in the second quarter of the year.

NORTH AMERICA (NAFTA)

In 2019, the U.S. automotive industry contributed 2.7% to the United States Gross Domestic Product (GDP), corresponding to a total revenue of 545.5 billion dollars. Since the financial crisis between 2008 and 2010, North America grew steadily in the number of units sold until 2016, showing a negative growth rate after that year, in 2017 and 2018, with this latter presenting a decrease of 1.0% in the number of passenger cars sold. However, United States showed in 2018 the highest percentage of sales in the global car market, 17.6%, which represents nearly 14 million of units sold.

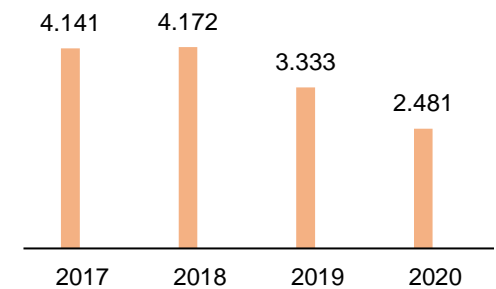
The deceleration witnessed resulted mainly due to the trade war between U.S. and China. This conflict led Donald Trump to apply tariffs policies in order to encourage consumers to buy American products, making imported goods more expensive. Since China is the second U.S. largest motor vehicle parts supplier, United States purchase this specific raw material locally, in order to avoid taxes. Thus, consumers have been largely affected, since costs increased and, consequently, sales declined.

Some of the U.S. policies applied to the automotive industry serve to encourage consumers to buy more fuel-efficient, high performance and low-emission vehicles. Demand for electric cars is rising exponentially, being that it is estimated that in 2025 sales of this type of vehicles will grow by around 300%, compared to the number of electric cars sold in 2017. Despite this great business opportunity that automotive manufactures have to explore, import tariffs imposed by U.S. will bring a lot of difficulties for these auto manufacturing companies abroad.

ASIA

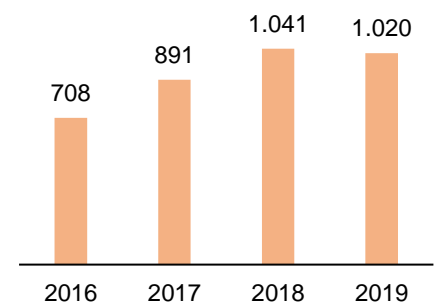
Asia presented the highest growth rate value of real Gross Domestic Product (GDP), both in 2018 and 2019, comparing with the remaining economies. China is the major responsible of the Asia's high growth rate in the past few years, becoming the biggest electric car market in the world, thanks to the support that the Chinese Government gave, in the form of subsidies, to the several Chinese start-ups in the auto industry responsible for technological advance. However, China's economic growth lost momentum as a result of a weakening of both domestic and export demand. This stabilization is especially due to the trade war between U.S. and China that led to a significant decrease of exportations demand in both countries, and the fact that the local currency appreciated against other currencies making domestic products more expensive. The remaining Asia economies could not disconnect from the slowdown in world trade, so these economies grew much more slowly than in the previous years, with India registering the highest drop and the lowest economic growth level in ten years.

Graph 8. EU 1Q passenger car registrations (in thousands)



Source: ACEA, Author

Graph 9. Number of passenger cars and commercial vehicles exported from China (in thousands)



Source: ACEA, Author

Coronavirus began in Wuhan, China, and early on affected China's economy and, consequently, the automotive sector. Although it is too early to assess the tremendous impact of this pandemic, car sales in China fell 92% in the first half of February and, according to IHS Markit, due to the quarantine that forced many factories to close until late March, it is expected a reduction of 1.7 million vehicles produced in China. The consequences of this pandemic were quickly felt all over the world, being the idea of a severe financial crisis worldwide more and more real.

6. INDUSTRY TRENDS

DAIMLER

ELECTRIC VEHICLES

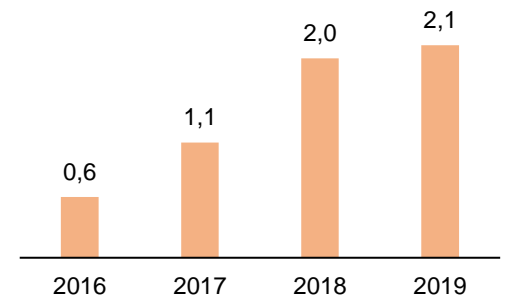
The development and constant improvement of electric and autonomous cars are aligned with Daimler's main objectives and concerns – sustainability, urbanization and technological change. The global electric vehicle (EV) market was valued at around 162€ billion in 2019 and is projected to surpass the 800€ billion mark by 2027, presenting a CAGR of above 20%. According to International Energy Agency (IEA) 2020 outlook, in 2019, electric vehicles⁴ registered a record of 2.1 million of units sold globally, more 6% than in 2018, boosting the global stock of electric cars to 7.2 million. In the past year, electric cars accounted for 2.6% of global car sales and about 1% of global car stock, registering a 40% year-on-year increase. Based on this outlook, battery electric vehicles (BEVs) represent the highest percentage of EVs sold, being plug-in hybrid vehicles (PHEVs) the second choice for most of the electric cars' consumers.

China is now leader in both the supply of - and demand for - electric vehicles, representing 47% of the global stock of electric cars. China recorded 1.5 million electric units sold in 2019, around 7% of all automobile sales in this country, when comparing with the 162 thousand electric units (4.3% of all automobile sales) sold by Germany's automobile producers, considering the same period of time (Source: *Bloomberg*).

This constant increase in the number of EVs sold was influenced by two main factors: policy and regulation, and customer demand. Considering the first one, local governments have been playing a very active role in encouraging the acquisition of EVs, through the designation of fuel economy and emissions standards, creation of financial incentives and restriction on the city accesses. Efforts to achieve pre-established CO₂ emissions, subsidies, value-added taxes and vehicle registration tax exemptions and plans to ban gasoline and diesel cars by 2030 in approximately 20 major cities, are the bases in the policy and regulation factors that governments seek to implement and achieve in the next few years. Regarding customer's demand, although the search for a BEV rose recently, since they bring a wide range of benefits (performance, lower running cost, full city access, etc.), still exist some concerns that make consumers reticent when purchasing an EV, such as: driving range; cost premium; lack of infrastructure; and, time required to charge.

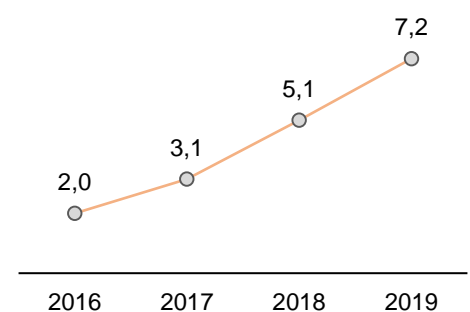
Having in mind the benefits and concerns that consumers' have regarding EVs, as well as the efforts and support given by local governments to increase EVs acquisitions, Daimler Group is developing a new generation of battery-electric vehicles – the concept EQ. This is a concept that Mercedes-Benz pretends to plant in the next few years and consist in several electric vehicle models adapted to current and future needs, always keeping the high quality that Daimler has already accustomed its customers.

Graph 10. Total EVs sold (in millions), per year



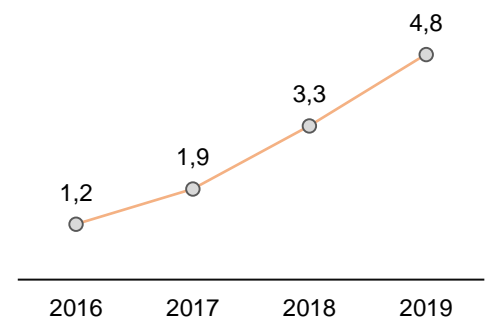
Source: IEA, Author

Graph 11. Global EVs stock (in millions)



Source: IEA, Author

Graph 12. Global BEV stock (in millions)

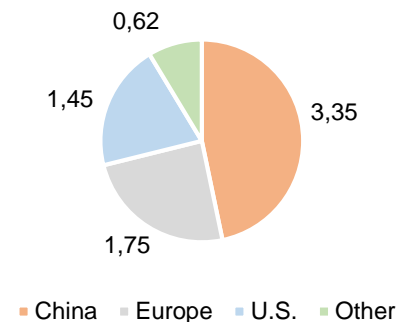


Source: IEA, Author

⁴ In this outlook, electric vehicles (EV) refers to either battery electric vehicle (BEV) or plug-in hybrid electric vehicle (PHEV) in the passenger light-duty vehicle segment.

Modern, sustainable mobility, safety, comfort and, especially, high power batteries are the main pillars that Daimler intends to work on to produce the best electric cars on the market and, through the brand's high reputation, to face the high competition of EVs that already exists. In the next few years, Daimler Group seeks to invest more than 10 billion euros in the expansion of its electric fleet at Mercedes-Benz Cars, in order to launch more than ten new electric models in its series production.

Graph 13. EVs stock (in millions), per region



Source: IEA, Author

7. COMPETITIVE POSITION

DAIMLER

COMPETITORS AND PARTNERSHIPS

Daimler Group has a huge presence and reputation worldwide, being one of the biggest producers of commercial and premium automobiles. These facts made Daimler the first choice for most of consumers, which seek to acquire a high quality, comfortable, powerful and elegant vehicle. Being already a leader in the Internal Combustion Engine (ICE) market, Daimler uses partnerships to further increase its leadership and, thus, contribute more and more to a better and higher quality production which aims to face off the needs of the current market.

The recent partnership with BMW, a German automotive brand and Daimler's biggest direct competitor in the ICE and, recently, electric market, focus in establishing a new player in the segment for mobility services in Europe and Latin America. This mobility offer goes through the development of a valuable know-how and the acquisition of the necessary resources that will help in the development of driving assistance systems, as well as automated parking functions. Beside this partnership, Daimler teamed up with BMW and Geely, a Daimler's shareholder from China, in order to develop smart cars into future Daimler's all-electric fleet.

In the beginning of 2019, Daimler acquired the majority interest of Torc Robotics, a company that is pioneer in the field of autonomous driving, being now part of the Autonomous Technology Group of Daimler. It is also important to highlight the cooperation between Daimler and Sila Nanotechnologies, a battery material specialist that will allow Daimler to develop powerful and durable batteries for the electric vehicles that will join the fleet soon.

Daimler's biggest difficulty will be to ensure an equal leadership position in the EVs market, as it has in the ICE market. Is in this most recent type of market that Daimler's real competitors appear, since they already have a high reputation and EVs that meet the needs of various types of consumers. Considering the commercial segment, Asia is a tough territory to enter due to the large quantity of electric manufactures that already exist and the high demand for domestic products. Analyzing the rest of the world, there are several companies, such as Renault-Nissan and Volkswagen Group, for example that already count with a large fleet of affordable EVs. Regarding the premium segment, Tesla, Jaguar and BMW have a strong presence in the market, with Tesla being the first choice for the majority of the consumers, especially because they offer an elegant, powerful and technological electric car, with the highest driving range (km) of the market. Although these complications, Daimler's efforts to enter in the automobile electric market, through the establishment of strategic partnerships, aimed at creating EVs that combat the gaps in the market, may prove to be a very valuable asset in its future portfolio.

SWOT ANALYSIS

The following SWOT analysis summarizes the strengths, weaknesses, opportunities and threats of Daimler AG. Despite the reputation and strong presence that the brand has in the market and the arising of new market opportunities with the appearance of new trends of mobility, it is notorious the existence of a large quantity of threats due to the financial and economic instability that the world is facing right now. Each of these threats have different direct impacts on Daimler and different probability of occurrence, being that, Daimler AG are already doing efforts to mitigate future possible falls in the market or breaks in the group's daily business operations.

Strengths	Weaknesses
<ul style="list-style-type: none">• Qualified and diversified workforce• High investment and R&D• High brand recognition/reputation• Presence worldwide• Marketing campaigns	<ul style="list-style-type: none">• High average prices compared with other competitors, which can lead to a high decrease in sales after a recession• Low offer of hybrid/electric vehicles• Specific suppliers, creating a large dependence for Daimler
Opportunities	Threats
<ul style="list-style-type: none">• Automated and autonomous driving• Increase in demand for electric drive systems (electric alternatives)• Technological Improvements• Partnerships• Large margin of growth in Asia, especially in China	<ul style="list-style-type: none">• Political uncertainty (trade conflict between USA and China, Brexit, USA elections)• Additional tariffs imposed by USA on imported vehicles and parts, including from the European Union• Outbreak of the coronavirus• Rising of oil price and volatile exchange rates• Decrease of demand due to the continued unfavorable development of the Chinese market

PORTER'S FIVE FORCES

Competitive Rivalry (4)

Rivalry competition has been one of the biggest threats that Daimler has faced off in the last years. Being the segment of premium cars highly competitive, the search for better and latest technologies is a key figure in this type of market. Although the high investment in R&D, Daimler maintain a low level of supply for electric/hybrid cars compared to its closest competitors, which can affect Daimlers' demand in a near future. Besides that, more brands seek to operate in the premium car segment (Volkswagen, Lexus), making this gaining value a threat considerably high for Daimler.

Threat of New Entrants (2)

The car market implies a colossal initial investment, since it is necessary to invest a lot of capital in manufacturing and R&D processes. This fact aligned with the existence of a strict regulation in this type of industry, established by the Government, makes very difficult for new producers to entry in the market. Possible direct competitors of Daimler are the car manufactures that are already in the industry but not in the premium segment, or even new electric vehicles manufacturers, since this type of market is recent.

Threat of New Substitutes (4)

Times of economic instability can affect Daimler unit sales, since downward trends in the economy may lead customers to less costly options. Even considering only brands that produce luxury and premium cars, Daimler has to face off several possible substitutes in various car models, due to similarities in the design and/or engine with other brands (AMG GT from Daimler and Panamera by Porsche, A-180 from Mercedes and Serie 1 from BMW, etc.).

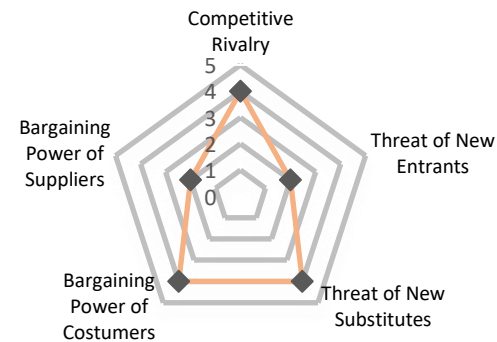
Bargaining Power of Costumers (4)

Costumers have a reasonable bargaining power, since exists a high number of substitutes and they can have easy access to various information from several brands. Besides that, Daimler has developed a high loyalty with costumers during the years, once they are much related with the brand's image and the notion of status it provides.

Bargaining Power of Suppliers (2)

Considering the luxury/premium segment that Daimler has, there are few possible suppliers, and the ones that are a possibility have a long and solid relationship with the brand, which confers a strong negotiation power to Daimler AG. The list of suppliers gets reduced given the quality of inputs demanded by Daimler.

Figure 5. Porter's Five Forces



Source: Author

8. VALUATION

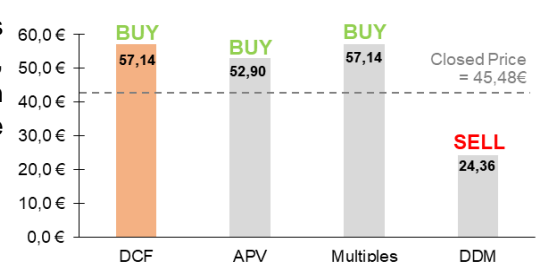
DAIMLER

Valuation Target Price: 57.14€ (2020YE)

Recommendation: BUY

Graph 14. Target Price 2020YE, per valuation

The final recommendation for DAI stands for BUY. Daimler valuation price is 57.14€ per share at 2020YE, using the Discounted Cash-Flow (DCF) model, representing an upside potential of 25.64%. Besides DCF, three more valuation methods were conducted: the Adjusted Present Value (APV); the Relative (Multiples) Valuation; and, the Dividend Discount Model (DDM).



Source: Author

REVENUES

Due to the virus COVID-19, the world suffered a health and economic crisis that affected most companies, especially the automotive industry. For the first time ever, the world "stopped" for several months (depending on the region), leading to a huge decrease in the number of automobile vehicles sold and, consequently, Daimler's units sold.

For the Revenue's forecast, it was considered the percentage of Daimler Units Sold in the Global Auto Sales, since 2007, in order to catch the financial crisis period between 2008 and 2009. An average of this percentage was computed for the last thirteen years, obtaining a value of 2.99%. Based on several reliable analyzes (CNBC, Europe Auto News and Counter Point Research), the Global Auto Sales is expected to plummet around 20% in 2020YE, to 73 million units, 18 million units lower than 2019. Computing the average of 2.99% previous explained times the expected number of Global Auto Sales for 2020YE, it is projected that Daimler will sell 2 182 million vehicles in this current year.

Table 6. Global Auto Sales

(in millions)	Coronavirus Period			
	2017	2018	2019	2020F
Global Auto Sales	95.7	95.6	91.4	73.1
Δ	—	-0,01%	-4,49%	-20,00%

Source: ACEA, Author

After forecasting Daimler's Unit Sales for 2020YE, it was necessary to calculate the average price per unit. For this purpose, the number of units sold annually was divided by the corresponding year's revenues, since 2007, obtaining an average unit price of 50 735€. Multiplying this value by the estimated units that Daimler will sell in 2020, a revenue forecast's of 110 730€ million was obtained.

The result of this forecast implies a decrease of 35.9% in Daimler's revenues for 2020YE, comparing with the previous year (2019YE: 172 745€ million). Analyzing the behavior of Daimler's revenues in the crisis that preceded the pandemic one and, also, its performance in the market in relation to its competitors, it is expected that Daimler will not have such a sharp decrease in its revenues this year. Therefore, an exponential smoothing technique was applied, with the intention of, the calculated decrease in revenues for 2020 is still reflected in 2021, causing a second decrease next year, although with evidence of improvement.

After this proceed, a value for Daimler's revenues of 129 335€ million and 115 405€ million were obtained, for 2020YE and 2021YE, respectively. From 2021 onwards, it is expected that Daimler's revenues will increase at the same pace experienced in the period following the financial crisis, that is, 10.7%, corresponding to the average growth rate of the following 5 years after 2009.

The final forecast for Daimler's Revenues can be found in table 9. It is possible to observe that Daimler is expected to recover the values reached in the period before the crisis in 2025.

COST OF SALES

Considering the last 5 years since 2015, Daimler's cost of sales accounted for an average of 80.1% of its revenues. Daimler's cost of sales has increased, in absolute terms, every year since 2015 and, especially, in 2019, due to reassessment of risks relating to ongoing governmental and legal proceedings and measures regarding to Mercedes-Benz diesel vehicles in various regions and markets. This growth in recent years was accompanied by a gradual growth in revenues, so the percentage of cost of sales in revenues never varied much beyond the average value.

NET DEBT

In 2020YE it is expected that Daimler will reach a net debt of 146 699€ million, an increase of 9.75% comparing with 2019YE. Although Daimler's liquidity is forecast to increase in 2020, this growth does not follow the one that is expected for the financing liabilities, causing an increase in net debt. Daimler's financing liabilities were forecasted assuming the C.A.G.R. of the last five years.

It should be noted that, in 2019YE Daimler presented the third highest value of total debt (161 201€ million) in the automotive industry, behind Volkswagen (196 015€ million) and Toyota (179 150€ million), and the third highest value of debt-to-equity ratio (2.13), behind Ford (4.68) and General Motors (2.47).⁵ Although the expected debt values for the remaining companies in the sector are not known for 2020YE, this expected increase in Daimler's net debt will progressively contribute to the high uncertainty of investors.

Table 7. Daimler Unit Sales

(in millions)	Coronavirus Period			
	2017	2018	2019	2020F
Daimler Unit Sales	3.27	3.35	3.34	2.18
% Global Auto Sales	3.42%	3.50%	3.66%	2.99%

Source: Daimler's Annual Report, Author

Table 8. Daimler's average unit price

	2008	2009	...	2019
Revenues (in million)	98.47	78.92	...	172.75
Average Price (€)	47 503	50 876	...	51 643
Average				50 735

Source: Daimler's Annual Report, Author

Table 9. Daimler's revenues forecast

(in millions)	Before Exponential Smoothing		After Exponential Smoothing	
2020F	110.73	-35.9%	129.34	-25.1%
2021F	122.56	10.7%	115.41	-10.8%
2022F	135.66	10.7%	127.74	10.7%
2023F	150.16	10.7%	141.39	10.7%
2024F	166.20	10.7%	156.50	10.7%
2025F	183.96	10.7%	173.22	10.7%

Source: Author

Table 10. Daimler's cost of sales forecast

(in millions)	Cost of Sales	% of revenues
2020F	-103.58	80.1%
2021F	-92.42	80.1%
2022F	-102.30	80.1%
2023F	-113.23	80.1%
2024F	-125.33	80.1%
2025F	-138.72	80.1%

Source: Author

Table 11. Daimler's net debt forecast

(in millions)	Liquidity	Financ. Liab. (nominal)	Net Debt
2020F	35.19	-181.82	-146.70
2021F	35.34	-204.66	-169.33
2022F	42.28	-230.40	-188.12
2023F	50.81	-259.41	-208.61
2024F	61.16	-292.10	-230.95
2025F	73.63	-328.95	-255.32

Source: Author

⁵ Font: Thomson Reuters

CAPITAL EXPENDITURE (CAPEX)

Daimler pretends to expand systematically its product range in the next years, by achieving a more technological and “futurist” portfolio and improving its products quality, through the digital connectivity of its products and processes along the entire value chain. For that reason, Daimler intends to keep a very high level of investments, especially in property, plant and equipment.

Daimler's capital expenditures for each year was obtained by analyzing the investment in property, plant and equipment plus the addition investment in intangible assets. In the 1st semester interim report that Daimler issued, it was observed that the Group reduced its investments, in absolute value, comparing to the one achieved in the same period of 2019. This observed decrease is due to the expected decrease in revenues, leading to a reduction in Daimler's development budget, but remaining unchanged the focus on future technologies.

Since the projection that Daimler does for its revenues is a major key to determine the value that the Group will invest in PP&E and intangible assets, the forecast for 2020 and the following years was done using the average percentage of this investments in Daimler's revenues, in the last five years. Daimler is expected to invest a total amount of 7 637€ million in 2020YE, less than 29.5% than the previous year.

DEPRECIATION & AMORTIZATION (D&A)

The Group intends to keep its values of property, plant and equipment and intangible assets relatively unchanged for 2020, even considering the pandemic situation. This maintenance will mainly occur due to the reduction of the CapEx value for this year, caused by the drastic reduction in Daimler's revenues. Daimler's CapEx for 2020 will have as main objective the replace of existing PP&E - in a new one more sophisticated and that will allow the construction of more technological vehicles - and not the increase in value of those assets.

Assuming this, the depreciation and amortization will keep a similar value in 2020YE, comparing with the one achieved in 2019YE. To calculate D&A for 2020 and onwards, the average percentage of D&A in the amount of PP&E plus intangible assets of the past five years was computed, assuming the same percentage until 2025. Therefore, was obtained a D&A of 7 398€ million for 2020YE (2019YE: 7 751€ million). From 2021 onwards, an annual increase in PP&E is expected, accompanied by an increase in D&A.

NET WORKING CAPITAL (NWC)

Daimler's inventories, accounts receivables (AR) and accounts payables (AP) were computed using efficiency ratios, namely days inventory outstanding (DIO), days sales outstanding (DSO) and days payables outstanding (DPO), respectively. After calculate the average days of inventory, sales and payables outstanding, for the last five years, from 2015 until 2019, and the correspondent forecast of Daimler's revenues and cost of sales, it was possible to calculate the value of inventories, AR and AP for each year, from 2020 until 2025, inclusively. Therefore, it is expected that inventories, AR and AP will decrease in 2020, leading to a decrease in the net working capital for the current year. For 2020YE, it is forecasted a value for NWC of 20 655€ million (2019YE: 29 382€ million).

Table 12. Daimler's capital expenditure forecast

(in millions)	Invest. in PP&E	Invest. in I.A.	CapEx
2020F	5.18	2.46	7.64
2021F	4.62	2.20	6.81
2022F	5.11	2.43	7.54
2023F	5.66	2.69	8.35
2024F	6.26	2.98	9.24
2025F	6.93	3.29	10.23

Source: Author

Table 13. Daimler's depreciations & amortizations and impairments forecast

(in millions)	I.A.	PP&E	D&A/Impar.
2020F	17.03	34.44	7.40
2021F	19.13	38.32	8.26
2022F	21.50	42.65	9.22
2023F	24.15	47.46	10.29
2024F	27.13	52.82	11.49
2025F	30.49	58.79	12.83

Source: Author

Table 14. Daimler's net working capital forecast

(in millions)	Invent.	A.R.	A.P.	NWC
2020F	21.45	9.04	9.84	20.65
2021F	19.14	8.07	8.78	18.43
2022F	21.19	8.93	9.72	20.40
2023F	23.45	9.88	10.76	22.58
2024F	25.96	10.94	11.90	25.00
2025F	28.77	12.11	13.18	27.66

Source: Author

DISCOUNTED CASH-FLOW (DCF)

The **Discounted Cash Flow** was the first valuation model used to preview the share price of Daimler's for 2020YE. The DCF model is based on the estimation of Future Cash Flows to the Firm (FCFF), and for this model it is necessary to identify and calculate several variables

Using DCF, a target price of **57.14€** in 2020YE was reached, reflecting in an upside potential of 25.64% from its closing price of 45.5€ on September 19, 2020. DAI is currently undervalued, so, the recommendation, based on this valuation method, is to **BUY**.

To discount the forecasted FCFF, **WACC** (Weight Average Cost of Capital) method was used. For this purpose, the **valuation period** considered was 6 years, from December 31, 2020 until December 31, 2025, and a single WACC was used, since Daimler's intends to keep a credit rating of A.

The **Cost of Equity (ke)** is the rate of return a company pays out to equity investors. For 2020, it was predicted a ke of 9.1%. To compute this rate is necessary several inputs, based on the Capital Asset Pricing Model (CAPM) formula.

The **Levered Beta (β)** for Daimler was calculated by regressing the Group monthly returns with the returns of the Euro STOXX 600. The window chosen was five years, since 2015, giving a sufficient timeframe for this purpose. In the regression output, the levered *beta* is represented by the slope of the Daimler returns (y) on the Euro STOXX 600 returns (x), being in this case 1.8 ($R^2 = 0.61$).

Other methods to calculate the levered *beta* were also computed, being one of them the manually calculation using the unlevered *beta* for Auto & Trucks sector provided by Damodaran's, achieving a value of 1.30. Thomson Reuter's levered *beta* for Daimler was used as reference, being showed, at the date that those calculations were done, a value of 1.50. By analyzing the auto sector market and the volatility showed by Daimler stocks during 2020, caused by the pandemic situation, it was considered the levered *beta* calculated in the first method explained, since it shows a higher value, providing a final Daimler's target stock price for 2020YE more realistic.

For the **Risk-Free rate (Rf)**, it was considered the yield of the Germany 10-Year Bond on September 8, 2020, of 0.46%.

The **Market Risk Premium** considered was 5.23%, based on the Risk Premium for Germany calculated for Damodaran's. Following the same method, the **Country Risk Premium** had the value of 0.0%.

The **Cost of Debt (kd)** is the return that a company provides to its debtholders and creditors. In order to calculate the cost of debt, it was divided Daimler's total interest expenses forecasted for 2020 for the net debt forecasted for the same year, obtaining a value of 2.4%. Exists other ways to calculate cost of debt, being the spread plus the risk free rate one of them. This last method was also computed, being the spread considered the average historical spread for the 6-month EURIBOR, being obtained a value of 0.7%, which is considerably lower than the desired value.

For **Daimler's Capital Structure – (D/V) and (E/V)**, it was considered Daimler's net debt and equity forecasted for 2020. Using these values, a weight of debt of 72% and a weight of equity of 28% were achieved.

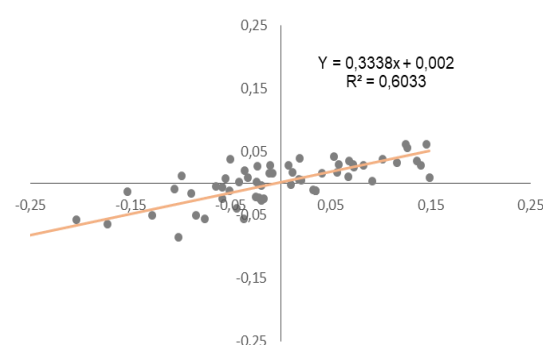
For **Tax Rate (T)**, we considered the effective tax rate instead of the marginal tax rate, as mentioned on Daimler's Annual Report. Daimler's effective tax rate assumed the value of 29.3% in 2019, increasing 0.9% than the previous year, 2018. Effective tax rate measures how much federal income tax it is paid on the amount of income earned, while the marginal tax rate refers to the amount of

Table 15. WACC assumptions and calculations

Cost of Debt	
Interest Expenses (in millions)	3.46
Net Debt (in millions)	146.70
Cost of Debt	2.4%
Cost of Equity	
Risk-Free Rate	1.13%
Country Risk Premium	0.00%
Market Risk Premium	5.23%
Beta levered	1.80
Cost of Equity	9.1%
WACC	
Weight of Equity	28%
Weight of Debt	72%
WACC	3.7%

Source: Author

Graph 15. Regression of Daimler returns (Y) on the Euro STOXX 600 returns (X)



Source: Author

Table 16. Growth rate calculations based on average European HICP

Year	Average HICP Europe
2019	1,20%
2018	1,75%
2017	1,54%
2016	0,24%
2015	0,03%
2014	0,43%
2013	1,35%
2012	2,50%
g	1.13%

Source: inflation.eu, Author

tax that will be applied to each additional level of income. The effective tax rate is preferable and compensatory in companies with high amounts of revenue, such as Daimler.

With all these inputs, a value of 4.0% for **WACC** in 2020 was computed. The value of WACC in 2020 was assumed constant in the following years, so the perpetuity **WACC** equals 3.7%.

For **Perpetual Growth Rate (g)**, it was computed the average of the European Harmonized Index of Consumer Prices (HICP) per year, since 2012, of 1.13%.

At the time of calculation of the DCF method, Daimler had **1.07 billion shares outstanding**.

SENSITIVITY ANALYSIS

A sensitivity analysis was conducted in order to understand and analyze the impact of some important inputs used in the DCF model on the Daimler's share price. For this purpose, the variables chosen were the perpetual growth rate, with variations of 0.1% and WACC, influenced by unlevered *beta* with variations of 0.1.

The perpetual growth rate was chosen in order to analyze the impact of the economy in the share price and, the unlevered *beta* was chosen to assess the influence of the level of market risk of Daimler's in its share price.

By analyzing the table 17, it is possible to observe a variation in Daimler's share price between 25.06€ and 156.57€, based on worst and best case scenario, respectively.

Table 17. DCF calculations (in millions) and final target price

DCF	Values
Terminal Value	230.267
PV of Terminal Value	184.689
NPV of FCFF	23.153
Enterprise Value	207.842
Net Debt	146.699
Equity Value	61.143
Nº of Shares	1070
Target Price	57.14€

Source: Author

Table 18. Sensitivity Analysis

		1.3	1.4	1.5	1.6	1.7	1.80	1.9	2.0	2.1	2.2	2.3	Beta
		3,2%	3,3%	3,4%	3,5%	3,6%	3,7%	3,8%	3,9%	4,0%	4,1%	4,2%	WACC
Growth Rate	0.8%	90,56	81,65	73,43	65,81	58,74	49,38	46,02	40,27	34,89	29,83	25,06	
	0.9%	99,17	89,53	80,67	72,49	64,91	54,91	51,33	45,21	39,50	34,14	29,10	
	1,0%	108,56	98,10	88,51	79,69	71,55	60,84	57,01	50,50	44,41	38,72	33,39	
	1,1%	122,13	110,42	99,74	89,97	80,99	69,22	65,04	57,93	51,32	45,15	39,38	
	1.2%	130,16	117,69	106,34	95,99	86,49	74,09	69,70	62,23	55,30	48,85	42,83	
	1.3%	142,67	128,95	116,53	105,24	94,94	81,54	76,80	68,78	61,35	54,45	48,03	
	1.4%	156,57	141,39	127,74	115,38	104,15	89,61	84,50	75,85	67,86	60,47	53,61	

Source: Author

ADJUSTED PRESENT VALUE (APV)

The APV model is very common to use in highly indebted companies or companies with frequent variations in their capital structures. Since Daimler is a company with these characteristics, it makes perfect sense to develop this model, alongside with the DCF model.

Besides that, the APV model is frequently used together with DCF, in order to give veracity to the conclusions drawn. APV always works when WACC does, but sometimes the inverse relation does not occur, since APV does not requires so much assumptions. For the same reason, APV is less prone to serious errors than WACC and, consequently, the DCF model.

However, when the WACC assumptions are as realistic as possible, DCF valuation becomes a much more powerful method than APV, being the results of the DCF much more used in the conclusions of several equity researches developed by analysts.

For the APV method, it was necessary to calculate two important components: the *base-case value*, using FCFF and cost of equity; and, *all financing side effects*, based on the interest tax shield and using cost of debt.

Table 19. Base-case value calculations

Base-Case Value			
Year	2020F	...	2025F
Discount Period	1	...	6
FCFF	13.409	...	5.953
Terminal Value	—	—	67.928
Discount Factor	0,91	...	0,57
Present Value (PV)	12.202	...	38.566
(1) Total PV	65.996		

Source: Author

Table 20. Financing side effects calculations

Financing Side Effects			
Year	2020F	...	2025F
Discount Period	1	...	6
Interest tax shield	1.015	...	1.766
Terminal Value	—	—	143.507
Discount Factor	0,98	...	0,87
Present Value (PV)	991	...	124.761
(2) Total PV	130.819		

Source: Author

Considering the *base-case value*, since all the variables used were obtained previously, mainly due to the DCF valuation, the calculation was simple, achieving a total present value for 2020YE of 72 481€ million.

Regarding *all financing side effects*, it was necessary to calculate the interest tax shields from borrowings until 2025F, multiplying the value of debt forecasted for each year by the value of tax rate (29.3%) and the cost of debt (2.4%). After this, it was obtained a total present value for 2020YE of 130 819€ million.

To calculate the target price, the total present value of the *base-case value* was summed up with the one of the *all financing side effects*, obtaining a total amount of 203 300€ million. Since the value of debt forecasted for 2020YE is 146 699€ million, a value of 56 601€ million for the APV was achieved. Finally, it is expect a Daimler's share price of 52.90€ for 2020YE, representing an upside potential of 16%, when comparing with the closed share price of 45.5€ reached on September 19th, 2020.

MULTIPLES VALUATION

Selection of Peers

The first step, and the most important one in this valuation, is the peers' selection. This selection was done using Thomson Reuters, which allows the extraction of all companies in the automotive sector operating worldwide, based on the variables pretended. Using this approach, the selection criteria chosen were: market capitalization; debt-to-equity ratio; *beta*; and, EBITDA margin.

Starting by the market capitalization, which measures the size of the company, all companies with a market cap six times higher or lower than the one presented by Daimler were excluded.

The next criterion was the debt-to-equity ratio, which assesses the firm's leverage. The motive of exclusion here were the firms with more equity than debt (debt-to-equity ratio less than 1) or firms with a ratio above 3, where the debt was three times higher than equity.

Beta measures the risk level to which each company is exposed. Therefore, companies with a risk level similar to Daimler should be considered, so, were excluded peers that had a *beta* 30% higher or lower than Daimler ($1.12 < 1.60 < 2.08$). Companies with a *beta* with a variation greater than or less than one third of Daimler's *beta*, already represent companies with different levels of risk. At this stage, none of the peers remaining were excluded.

Finally, in order to reach Daimler's final peer group, a profitability ratio was chosen – EBITDA margin. In this case, companies with an EBITDA margin 5% higher or lower than the one presented by Daimler (15.6%) were excluded.

Daimler's final peer group was composed by: Toyota Motor Corp, Volkswagen AG, Bayerische Motoren Werke AG and General Motor Co.

Table 21. APV calculations

APV method		(in millions)
(1) Base-Case Value	72.481	
(2) Financing Side Effects	130.819	
(1)+ (2)	203.300	
Net Debt	146.699	
APV	56.601	
Target Price	52.90	

Source: Author

Table 22. Daimler's peers selection

Name	Revenue	Mcap	Debt-to-Equity Ratio	Beta	EBITDA Margin
Daimler AG	172.745.000.000	46.790.612.554	2,64	1,60	15,62%
Toyota Motor Corp	252.371.652.063	185.248.177.877	1,04	1,38	13,53%
Volkswagen AG	252.632.000.000	70.298.177.826	1,61	1,45	16,64%
Bayerische Motoren Werke AG	104.210.000.000	39.318.958.863	1,93	1,37	13,04%
Honda Motor Co Ltd	125.899.245.422	38.181.108.394	0,97	1,29	8,54%
General Motors Co	122.423.638.220	36.479.651.858	2,47	1,42	15,11%
Hyundai Motor Co	81.738.675.478	32.927.400.489	1,17	1,35	7,19%
Ford Motor Co	139.072.154.000	22.809.739.962	4,68	1,27	10,92%
Peugeot SA	74.731.000.000	13.405.108.750	0,61	1,71	12,78%
Nissan Motor Co Ltd	83.299.244.882	13.077.306.086	1,95	1,45	7,93%
Porsche Automobil Holding SE	116.000.000	7.526.445.164	0,00	1,44	7,76%
Renault SA	55.537.000.000	6.210.349.007	1,70	1,77	11,64%
Mitsubishi Motors Corp	19.143.115.867	2.957.274.578	0,40	1,63	3,86%
Aston Martin Lagonda Global Holdings PLC	1.159.725.311	1.161.233.448	3,35	2,01	17,71%

Source: Thomson Reuters, Author

After the peers' selection, it was necessary to calculate the target price. For this purpose, the multiples used were: Price-to-Earnings ratio (P/E), Enterprise Value to EBITDA (EV/EBITDA) and Enterprise Value to Revenue (EV/Revenue).

For the **P/E ratio**, an average for the peers' group of 7.35 was obtained. Since Daimler's revenue in 2019 was 2 709€ million, multiplying by the average P/E of the peers group, it was reached a target price of 18.61€ for Daimler's 2020YE shares.

For **EV/EBITDA**, the average for the peer's group was 8.37. After using Daimler's EBITDA value and net debt, both for 2019YE, to calculate equity value, it was possible to reach a target price of 86.16 € 2020YE.

For **EV/Revenue**, it was obtained an average of 1.19 for the peers' group. After using Daimler's Revenue and net debt, both for 2019YE, to calculate equity value, it was possible to reach a target price of 66.65€ 2020YE.

Doing the average of the three target prices obtained from each multiple used, it was reached a final Daimler's target price of **57.14€** 2020YE, very similar to the one obtained using the Discounted Cash-Flow (52.77€). Therefore, a BUY recommendation remains with an upside potential of 25.6%.

As referred above, DCF valuation method gives a more realistic target price than multiples valuation, so, although the recommendation be the same for both valuation methods, it was assumed as the final target price for 2020YE the one reached by the DCF method.

DIVIDEND DISCOUNT MODEL (DDM)

Another valuation method was carried out, the **two-stage Dividend Discount Model**. To compute this method, the following inputs were required: profit attributable to shareholders, which has been forecasted in Income Statement; the dividend per share (DPS), where roughly 41% of the profit attributable to shareholders are distributed annually in dividends; a perpetual growth rate of 1.13% and a cost of equity of 9.1%, as disclosed before.

With all this data, it was possible to reach the intrinsic value of Daimler's share of 24.36€ for 2020YE, representing a 46.43% downside potential, when comparing with the share's closed price on September 19, 2020. This result goes against the conclusions drawn in the other three valuations, since due to the pandemic crisis it is not expected that Daimler will achieve net income values until 2025 similar to those before 2020. Note that, the 2019 DPS was already well below the previous years, due to the large investment in "Project Future", however it was expected that 2019 would be an outlier.

With all the economic uncertainty and difficult recovery that Daimler will face, the future dividends will not reflect the values obtained before 2018, therefore, only the conclusions drawn in the DCF, APV and multiples valuation were considered.

Table 23. Multiples valuation calculations

	P/E	EV/ EBITDA	EV/ REVENUE
Daimler AG	19.57	6.78	1.06
Toyota M. Corp.	9.65	11.51	1.56
Volkswagen AG	5.02	5.06	0.84
B.M.W.	8.17	10.04	1.31
General M. Co.	6.56	6.88	1.04
Average	7.35	8.37	1.19
Enterprise Value	–	225.85	204.98
Net Debt	–	133.66	133.66
Equity Value	19.91	92.19	71.32
Price (€)	18.61	86.16	66.65
Target Price	57.14€		

Source: Thomson Reuters, Author

Table 24. Daimler's EPS and DPS forecast

	Earnings per Share (€)	Dividend per Share (€)	Share Price
2020F	3.69	1.82	24.36€
2021F	2.70	1.33	
2022F	3.07	1.52	
2023F	3.49	1.72	
2024F	3.96	1.96	
2025F	4.49	2.22	

Source: Thomson Reuters, Author

9. FINANCIAL ANALYSIS

DAIMLER

Daimler's financial condition declined in 2019, largely due to the witnessed decrease in gross profit and net income, regardless the increase in revenues presented, when comparing to 2018. In 2019, cost of sales reached the highest percentage of revenues since 2015 and the group invested a lot in the "Project Future", leading to an increase in "other operating expenses" and, consequently, the decrease in net income as previous referred.

In 2020, Daimler foresaw a recovery of its financial condition, returning to the values of 2018. However, the pandemic situation further worsened its condition, with an expected decrease in revenues of 25.1% for this year. Despite this decrease in revenues, since Daimler reduced its cost of sales and resumed the values of “other operating expenses” of 2018 (2019 was an outlier), it is expected for Daimler to achieve a net income 2020YE higher than the one observed in 2019YE.

As explained, since in 2019 the value of net income was influenced by the large investment in re-organizing the group’s internal structure and, 2020 saw a pandemic crisis never seen before by Daimler, in order to give a better comparison of the calculated ratios between 2015 and 2025F, it was assumed the average of the values obtained between 2015 and 2019 (period A), comparing with the average obtained between 2020F and 2025F (period B).

PROFITABILITY RATIOS

Considering **EBIT Margin**, also known as Operating Margin, Daimler obtained an average of 6.4% for the period A, higher than the forecasted average of 4.8%, for the period B. Although Daimler reached the lowest EBIT Margin in 2019, considering the period referred and according to the forecasts made, the average obtained for the period B will be lower than the one obtained for the period A, since it is only expected for Daimler to resume the values of EBIT and revenues observed before the pandemic in 2025. With that, it is possible to conclude that, in period A, Daimler had a higher profit for each euro of sales, after paying all the associated variable costs (wages and raw materials).

For **Return on Equity (ROE)**, Daimler will observe a huge decrease, going from 12.6% in period A to 7.4% in period B. This decrease it is mainly due to the net income values that are expected to be reach during period B, values that will be always lower than the ones reached in period A (with the exception of 2019). By observing both values, it is possible to conclude that in period A, before the pandemic crisis, Daimler was able to make more profits from his equity investments.

Analyzing **Return on Assets (ROA)**, there is again a decrease between period A and period B, being this reduction, in percentage terms, more pronounced than the one observed in ROE. In this case, we have a decrease from 3.1%, in period A, to 1.1% in period B. This decrease is mainly due to the net income values observed in period B, compared to those achieved in the period A, similarly to what happens with ROE. In conclusion, Daimler did a better and more efficient management and use of its economic resources before 2020.

LEVERAGE RATIOS

Daimler’s **Debt-to-Equity ratio** it is forecasted to increase considerably from 1.74 in period A to 3.24 in period B. This growth of almost 90% is due to the fact that there is an expectation of an increase in debt for all the years considered in period B and, simultaneously, a decrease in equity in 2020F compared to 2019, since equity will only reach again the values before the pandemic crisis in 2023F. For that reason, it is possible to conclude that Daimler is financing its operation mainly with debt.

For **Interest Coverage Ratio**, which links EBIT with interest expenses, it is expected a huge decrease from 4.44 in period A to 1.45 in period B. This happens mainly because of a significant increase in interest expenses for period B, accompanied by a decrease in EBIT for the same period, for the reasons previously explained. Observing both values, Daimler will have more “difficulties” to pay the interest from its debt.

It is expectable a constant Weighted Average Cost of Capital (WACC) for Daimler in the long term, from 2022F onwards, since debt and equity will present, on average, a relatively similar CAGR value of 10% and 8%, respectively, being 2020F and 2021F considered as outliers, due to the effects caused by the pandemic situation.

EFFICIENCY RATIOS

For **Asset Turnover**, it is expected that Daimler will suffer a decrease in this ratio from 0.63 to 0.36, between period A and period B, respectively, largely due to the expected huge decrease in revenues, for 2020, and its slow recovery for the following years. With this decrease, Daimler will be less efficient at generating revenue from its assets.

Considering **Inventory Turnover, Receivables Turnover and Payables Turnover**, it is expected that in both three ratios the value for period B will be similar with the values reached in period A, being 6.04, 14.39 and 10.57, respectively. This occurs because, despite the decrease in revenues and the expected cost of sales for period B, it is expected that inventories, receivables and payables will fall in the same proportion, given the direct relationship they have.

10. INVESTMENT RISK

DAIMLER

Industry and Business – World Economy (IR1)

Daimler has a good incidence worldwide, with a huge percentage of unit sales in Europe, North America and Asia. This Daimler's strong presence on those regions creates a largely dependence, which can compromise the company business operations in case of economic instability. The concretization of Brexit, the trade conflict between U.S. and China, the threat of import tariffs by U.S. and, more recently, the outbreak of Coronavirus will bring an enormous impact to the world economy, making the idea of recession more and more real. The spread of the virus will be the main responsible for the increase of the probability of a world recession, leading to the implementation of new market barriers, an increase of unemployment and a decrease of the consumer's purchasing power, which will affect sales, production and the supply chain, not only of Daimler, but of all the automotive sector.

Figure 6. Daimler's assessment of probability of occurrence and possible impact

Level	Probability of occurrence	
Low	0% < Probability of occurrence	≤ 33%
Medium	33% < Probability of occurrence	≤ 66%
High	66% < Probability of occurrence	< 100%

Level	Possible impact	
Low	€0 < Impact	< €500 million
Medium	€500 million ≤ Impact	< €1 billion
High	Impact	≥ €1 billion

Source: Daimler's Annual Report

Industry and Business – Volatility of Consumer's Demand (IR2)

The financial market instability with consequences in the credit risk and in the consumer's purchasing power, aligned with the slowdown of the number of unit sold brings a big risk for Daimler, which could see its sales be harmed by the increase of new ways of mobility - drive-now vehicles, car-sharing and utilization of private transports using a simple application. On the other hand, a rise on others automotive specific sectors, such as electric and hybrid vehicles, can bring opportunities for Daimler, since is a market where the Group does not have an active presence yet.

Industry and Business – Automotive sector (IR3)

The economic growth rate, in general, has shown an increased percentage since the 2008 crisis, especially in North America and Asia, with this latter presenting the highest growth rate. However, 2019 proved to be a difficult year due to several financial and market instabilities, which caused a slightly decrease in the economic growth rate. 2020 seems to be a year that will worsen this weak economic growth witnessed in 2019, affecting the automotive sector, especially: in the maintenance of the number of employees; in the number of finished products exported, since the U.S. government are doing efforts to incentive the consume of domestic products, for example; and, the difficulty in importing essential goods for the vehicles manufactures.

Figure 7. Risk Matrix

	OR1 LP1	IR1		
	OR3	LP2		
OR2	FR2	FR1	IR2	
	IR3	FR3		

IMPACT

PROBABILITY

Source: Author

Legal and Political Issues – Emissions and fuel consumption (LP1)

The European Union Commission along with local Governments have established environmental and sustainable objectives that seek to reduce emissions levels, as well as emissions caused by the production of facilities. The non-compliance with these regulations brings a severe and catastrophic impact for any automotive company, which could lead to an exponential decline in the company's business operational activities. Daimler aims to apply certain strategies that go in accordance with the defined regulations, thus reducing the risk of significant penalties or the possibility of withdrawal in relevant markets.

Legal and Political Issues – Procurement market (LP2)

Political crisis and uncertainties, combined with financial bottlenecks⁶ for suppliers, impacts the price of raw materials, creating a volatile demand for this type of resources. Daimler AG requires certain raw materials for the manufacture of its vehicles, so potential tariff increases, as a result of a more protectionist tendencies, are going to imply a negative impact for the Group, leading to the acquisition of expensive raw materials that will affect the margins obtained on the vehicles sold.

Operational Risk – Investment (OR1)

The execution of modernization activities and the launch of new products are investments that involve a huge amount of capital, in order to ensure that the related processes of production are continuously evaluating and improving, avoiding delays or inefficiencies that may occur during any phase of manufacture. This type of investments, especially in the development of various battery types, one of the main Daimler's R&D objective for the short-term, can bring a significant risk for the Group, since they develop considerable dependencies with its partnerships. Capacity restrictions, interruption in the supply chain or even changes in regional conditions, can lead to bottlenecks situations causing a production slowdown and unexpected costs.

Operational Risk – Highly qualified workforce (OR2)

There exists an intense competition for highly qualified workforce in the automobile industry, so talent attraction, retention and long-term career perspective are crucial capabilities that Daimler pretends to manage. An efficient human resources management and a specialized training that the Group offers through Daimler Corporate Academy are crucial for ensure a demographic equal distribution of qualified and talented young people.

Operational Risk – Information technology (OR3)

The integration of information technology (IT) in all corporate segments increases customers' benefits and the value of the Group. However, this type of information is largely sensitive, so the threat of a cybercrime can affect the availability, integrity and confidentiality of important data, leading to a potential big loss for the company. In the past few years, Daimler Group mitigated the probability of occurrence of a cyber-attack, due to an extra and powerful control of data centers.

Financial Risk – Exchange rates (FR1)

A transaction risk occurs when revenue is generated in a currency different from the one of the related costs. Some subsidiaries of Daimler AG, such as Mercedes-Benz Cars & Vans, have almost all production costs in euros and a major portion of its revenues are generated in foreign currencies. The currency risk exposure is limited due to successively hedges using suitable financial instruments.

⁶ Financial bottleneck occurs when, in a Company's line of production, exists a point of operation that meets or exceeds the capacity of the facility.

Financial Risk – Interest rates (FR2)

Changes in interest rates can influence the management of cash required for Daimler's business operations on a day-to-day basis. Daimler Mobility is the major responsible for held financial instruments that connect with its business financial services, minimizing the risk of maturity mismatch.

Financial Risk – Liquidity risks (FR3)

Some liquidity risks may arise when the company is unable to fully meet its financial obligations. Daimler uses several financial instruments to refinance its business operations, being that an increase in the cost of refinancing or a limitation of the financial business services will bring a negative impact for the Group, resulting in an increase of its costs that could not be passed on to customers.

MONTE CARLO SIMULATION

Besides the sensitivity analysis previously presented, a Monte Carlo simulation was also carried out through the Crystal Ball Software – covering a total of 100.000 simulations. For these simulations, it were considered a normal distribution (and, the respective standard deviation) for the WACC (0.40%) and terminal growth rate (0.11%), since these variables could largely influence Daimler's target price.

The simulation bring the same conclusions as the DCF model, since an average target price of 56.80€ was obtained, leading to a BUY recommendation. Regarding Daimler's stock price of 45.48€ on 19th September 2020, we have 62% chances of achieve a higher stock price, showing how much our buy recommendation is accurate. Considering the 52.77€ target price of the DCF model, we only have a probability of 51% of achieving a higher price and 49% probability of obtain a price lower than 52.77€.

Table 25. Monte Carlo Simulation

Monte Carlo Simulation	
# of simulations	100.000
Base Case	52.77€
Mean	56.80€
Median	52.83€
Standard Deviation	29.02€
10% Percentile	36.70€
90% Percentile	72.66€

Source: Crystal Ball Software, Author

Graph 16. Results of Monte Carlo Simulation



Source: Crystal Ball Software, Author

APPENDIX 1 – STATEMENT OF FINANCIAL POSITION

1.1 Forecasted Statement of Financial Position

Consolidated Statement of Financial Position			At December 31,						
(In millions of euros)	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	
Assets									
Intangible assets	14.801	15.978	17.031	19.134	21.497	24.152	27.135	30.485	
Property, plant and equipment	30.948	37.143	34.437	38.324	42.650	47.465	52.822	58.785	
Equipment on operating leases	49.476	51.482	55.341	59.489	63.948	68.741	73.893	79.432	
Equity-method investments	4.860	5.949	6.747	7.652	8.678	9.842	11.162	12.659	
Receivables from financial services	51.300	52.880	57.326	62.145	67.369	73.033	79.172	85.828	
Marketable debt securities and similar investments	722	770	703	643	587	536	490	447	
Other financial assets	2.763	3.347	3.154	2.973	2.801	2.640	2.488	2.345	
Deferred tax assets	4.021	5.803	6.921	8.253	9.843	11.739	13.999	16.695	
Other assets	1.115	1.286	1.577	1.933	2.369	2.905	3.561	4.365	
Total non-current assets	160.006	174.638	183.236	200.545	219.743	241.052	264.723	291.042	
Inventories	29.489	29.757	21.453	19.142	21.188	23.452	25.958	28.732	
Trade receivables	12.586	12.332	9.040	8.067	8.929	9.883	10.939	12.108	
Receivables from financial services	45.440	50.781	55.708	61.114	67.044	73.550	80.686	88.516	
Cash and cash equivalents	15.853	18.883	26.917	26.806	33.409	41.573	51.552	63.640	
Marketable debt securities and similar investments	8.855	7.885	8.202	8.532	8.876	9.233	9.604	9.991	
Other financial assets	2.970	2.736	2.825	2.916	3.011	3.109	3.209	3.313	
Other assets	5.889	5.426	5.790	6.178	6.592	7.034	7.506	8.009	
Assets held for sale	531	0	0	0	0	0	0	0	
Total current assets	121.613	127.800	129.935	132.755	149.048	167.833	189.454	214.308	
Total assets	281.619	302.438	313.171	333.300	368.791	408.884	454.177	505.351	
Equity and liabilities									
Share capital	3.070	3.070	3.070	3.070	3.070	3.070	3.070	3.070	
Capital reserves	11.710	11.552	11.552	11.552	11.552	11.552	11.552	11.552	
Retained earnings	49.490	46.329	40.039	34.979	38.821	43.083	47.810	53.053	
Other reserves	397	393	1.026	916	1.014	1.122	1.242	1.375	
Equity attributable to shareholders of Daimler AG	64.667	61.344	55.687	50.516	54.457	58.827	63.674	69.050	
Non-controlling interests	1.386	1.497	1.553	1.611	1.671	1.734	1.799	1.866	
Total equity	66.053	62.841	57.240	52.127	56.128	60.561	65.473	70.916	
Provisions for pensions and similar obligations	7.393	9.728	10.406	11.132	11.909	12.739	13.628	14.578	
Provisions for income taxes	628	–	–	–	–	–	–	–	
Provisions for other risks	7.734	10.597	12.223	14.098	16.260	18.755	21.632	24.951	
Financing liabilities	88.662	99.179	112.563	127.754	144.994	164.561	186.768	211.972	
Other financial liabilities	2.375	2.112	1.986	1.867	1.755	1.650	1.551	1.458	
Deferred tax liabilities	3.762	3.935	4.812	5.883	7.194	8.797	10.756	13.153	
Deferred income	1.612	1.598	1.360	1.157	985	838	713	607	
Contract and refund liabilities	5.438	606	1.535	1.370	1.516	1.678	1.858	2.056	
Other liabilities	10	586	586	586	586	586	586	586	
Total non-current liabilities	117.614	133.795	145.470	163.847	185.199	209.604	237.492	269.361	
Trade payables	14.185	12.707	9.838	8.779	9.717	10.755	11.904	13.176	
Provisions for income taxes	823	–	–	–	–	–	–	–	
Provisions for other risks	7.828	10.327	10.652	10.986	11.332	11.688	12.055	12.434	
Financing liabilities	56.240	62.601	69.524	77.213	85.751	95.235	105.766	117.463	
Other financial liabilities	7.657	7.752	7.463	7.186	6.918	6.660	6.412	6.174	
Deferred income	1.580	1.624	1.809	1.614	1.787	1.978	2.189	2.423	
Contract and refund liabilities	7.081	7.571	7.627	7.682	7.739	7.796	7.853	7.910	
Other liabilities	2.346	3.220	3.515	3.837	4.189	4.573	4.992	5.449	
Liabilities held for sale	212	0	33	29	32	36	40	44	
Total current liabilities	97.952	105.802	110.461	117.326	127.465	138.720	151.212	165.074	
Total equity and liabilities	281.619	302.438	313.171	333.300	368.791	408.884	454.177	505.351	

1.2 Forecasted Common-size Balance Sheet Statement

Common-Size Statement of Financial Position								At December 31,
(In millions of euros)	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Assets								
Intangible assets	5,26%	5,28%	5,44%	5,74%	5,83%	5,91%	5,97%	6,03%
Property, plant and equipment	10,99%	12,28%	11,00%	11,50%	11,56%	11,61%	11,63%	11,63%
Equipment on operating leases	17,57%	17,02%	17,67%	17,85%	17,34%	16,81%	16,27%	15,72%
Equity-method investments	1,73%	1,97%	2,15%	2,30%	2,35%	2,41%	2,46%	2,50%
Receivables from financial services	18,22%	17,48%	18,30%	18,65%	18,27%	17,86%	17,43%	16,98%
Marketable debt securities and similar investments	0,26%	0,25%	0,22%	0,19%	0,16%	0,13%	0,11%	0,09%
Other financial assets	0,98%	1,11%	1,01%	0,89%	0,76%	0,65%	0,55%	0,46%
Deferred tax assets	1,43%	1,92%	2,21%	2,48%	2,67%	2,87%	3,08%	3,30%
Other assets	0,40%	0,43%	0,50%	0,58%	0,64%	0,71%	0,78%	0,86%
Total non-current assets	56,82%	57,74%	58,51%	60,17%	59,58%	58,95%	58,29%	57,59%
Inventories	10,47%	9,84%	6,85%	5,74%	5,75%	5,74%	5,72%	5,69%
Trade receivables	4,47%	4,08%	2,89%	2,42%	2,42%	2,42%	2,41%	2,40%
Receivables from financial services	16,14%	16,79%	17,79%	18,34%	18,18%	17,99%	17,77%	17,52%
Cash and cash equivalents	5,63%	6,24%	8,59%	8,04%	9,06%	10,17%	11,35%	12,59%
Marketable debt securities and similar investments	3,14%	2,61%	2,62%	2,56%	2,41%	2,26%	2,11%	1,98%
Other financial assets	1,05%	0,90%	0,90%	0,87%	0,82%	0,76%	0,71%	0,66%
Other assets	2,09%	1,79%	1,85%	1,85%	1,79%	1,72%	1,65%	1,58%
Assets held for sale	0,19%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Total current assets	43,18%	42,26%	41,49%	39,83%	40,42%	41,05%	41,71%	42,41%
Total assets	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%
Equity and liabilities								
Share capital	1,09%	1,02%	0,98%	0,92%	0,83%	0,75%	0,68%	0,61%
Capital reserves	4,16%	3,82%	3,69%	3,47%	3,13%	2,83%	2,54%	2,29%
Retained earnings	17,57%	15,32%	12,78%	10,49%	10,53%	10,54%	10,53%	10,50%
Other reserves	0,14%	0,13%	0,33%	0,27%	0,27%	0,27%	0,27%	0,27%
Equity attributable to shareholders of Daimler AG	22,96%	20,28%	17,78%	15,16%	14,77%	14,39%	14,02%	13,66%
Non-controlling interests	0,49%	0,49%	0,50%	0,48%	0,45%	0,42%	0,40%	0,37%
Total equity	23,45%	20,78%	18,28%	15,64%	15,22%	14,81%	14,42%	14,03%
Provisions for pensions and similar obligations	2,63%	3,22%	3,32%	3,34%	3,23%	3,12%	3,00%	2,88%
Provisions for income taxes	0,22%	—	—	—	—	—	—	—
Provisions for other risks	2,75%	3,50%	3,90%	4,23%	4,41%	4,59%	4,76%	4,94%
Financing liabilities	31,48%	32,79%	35,94%	38,33%	39,32%	40,25%	41,12%	41,95%
Other financial liabilities	0,84%	0,70%	0,63%	0,56%	0,48%	0,40%	0,34%	0,29%
Deferred tax liabilities	1,34%	1,30%	1,54%	1,77%	1,95%	2,15%	2,37%	2,60%
Deferred income	0,57%	0,53%	0,43%	0,35%	0,27%	0,20%	0,16%	0,12%
Contract and refund liabilities	1,93%	0,20%	0,49%	0,41%	0,41%	0,41%	0,41%	0,41%
Other liabilities	0,00%	0,19%	0,19%	0,18%	0,16%	0,14%	0,13%	0,12%
Total non-current liabilities	41,76%	44,24%	46,45%	49,16%	50,22%	51,26%	52,29%	53,30%
Trade payables	5,04%	4,20%	3,14%	2,63%	2,63%	2,63%	2,62%	2,61%
Provisions for income taxes	0,29%	—	—	—	—	—	—	—
Provisions for other risks	2,78%	3,41%	3,40%	3,30%	3,07%	2,86%	2,65%	2,46%
Financing liabilities	19,97%	20,70%	22,20%	23,17%	23,25%	23,29%	23,29%	23,24%
Other financial liabilities	2,72%	2,56%	2,38%	2,16%	1,88%	1,63%	1,41%	1,22%
Deferred income	0,56%	0,54%	0,58%	0,48%	0,48%	0,48%	0,48%	0,48%
Contract and refund liabilities	2,51%	2,50%	2,44%	2,30%	2,10%	1,91%	1,73%	1,57%
Other liabilities	0,83%	1,06%	1,12%	1,15%	1,14%	1,12%	1,10%	1,08%
Liabilities held for sale	0,08%	0,00%	0,01%	0,01%	0,01%	0,01%	0,01%	0,01%
Total current liabilities	34,78%	34,98%	35,27%	35,20%	34,56%	33,93%	33,29%	32,67%
Total equity and liabilities	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%

APPENDIX 2 – INCOME STATEMENT

2.1 Forecasted Income Statement

Consolidated Income Statement (In millions of euros)	At December 31,							
	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Revenue	167.362	172.745	129.335	115.405	127.738	141.388	156.496	173.220
Cost of sales	-134.295	-143.580	-103.578	-92.423	-102.300	-113.231	-125.331	-138.724
Gross profit	33.067	29.165	25.756	22.982	25.438	28.156	31.165	34.496
Selling expenses	-13.067	-12.801	-10.143	-9.050	-10.018	-11.088	-12.273	-13.584
General administrative expenses	-4.036	-4.050	-2.989	-2.667	-2.952	-3.268	-3.617	-4.004
Research and non-capitalized development costs	-6.581	-6.586	-6.590	-6.590	-7.155	-7.769	-8.435	-9.158
Other operating income	2.330	2.837	1.903	1.698	1.880	2.081	2.303	2.549
Other operating expense	-1.462	-4.469	-1.612	-1.778	-1.960	-2.161	-2.383	-2.627
Profit/loss on equity-method investments, net	656	479	574	512	567	628	695	769
Other financial income/expense, net	210	-262	2	1	1	2	2	2
Amortization of capitalized borrowing costs	-15	-16	-11	-9	-10	-11	-13	-14
Interest income	271	397	203	181	201	222	246	272
Interest expense	-793	-880	-542	-484	-536	-593	-656	-726
Profit before income taxes	10.580	3.814	6.551	4.797	5.456	6.198	7.034	7.974
Income taxes	-3.013	-1.121	-1.879	-1.376	-1.565	-1.778	-2.017	-2.287
Net Income	7.582	2.709	4.672	3.421	3.891	4.421	5.017	5.687
thereof profit attributable to non-controlling interests	333	332	166	122	138	157	178	202
thereof profit attributable to shareholders of Daimler AG	7.249	2.377	3.949	2.891	3.289	3.736	4.240	4.806

2.1 Forecasted Common-Size Income Statement

Consolidated Income Statement (In millions of euros)	At December 31,							
	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Revenue	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%
Cost of sales	-80,24%	-83,12%	-80,09%	-80,09%	-80,09%	-80,09%	-80,09%	-80,09%
Gross profit	19,76%	16,88%	19,91%	19,91%	19,91%	19,91%	19,91%	19,91%
Selling expenses	7,81%	7,41%	7,84%	7,84%	7,84%	7,84%	7,84%	7,84%
General administrative expenses	2,41%	2,34%	2,31%	2,31%	2,31%	2,31%	2,31%	2,31%
Research and non-capitalized development costs	3,93%	3,81%	5,10%	5,71%	5,60%	5,49%	5,39%	5,29%
Other operating income	1,39%	1,64%	1,47%	1,47%	1,47%	1,47%	1,47%	1,47%
Other operating expense	0,87%	2,59%	1,25%	1,54%	1,53%	1,53%	1,52%	1,52%
Profit/loss on equity-method investments, net	0,39%	-0,28%	0,44%	0,44%	0,44%	0,44%	0,44%	0,44%
Other financial income/expense, net	0,13%	0,15%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Amortization of capitalized borrowing costs	0,01%	0,01%	0,01%	0,01%	0,01%	0,01%	0,01%	0,01%
Interest income	0,16%	0,23%	0,16%	0,16%	0,16%	0,16%	0,16%	0,16%
Interest expense	0,47%	0,51%	0,42%	0,42%	0,42%	0,42%	0,42%	0,42%
Profit before income taxes	6,32%	2,21%	5,07%	4,16%	4,27%	4,38%	4,49%	4,60%
Income taxes	28,48%	29,39%	28,68%	28,68%	28,68%	28,68%	28,68%	28,68%
Net Income	4,53%	1,57%	3,61%	2,96%	3,05%	3,13%	3,21%	3,28%
thereof profit attributable to non-controlling interests	4,39%	12,26%	3,55%	3,55%	3,55%	3,55%	3,55%	3,55%
thereof profit attributable to shareholders of Daimler AG	95,61%	87,74%	84,52%	84,52%	84,52%	84,52%	84,52%	84,52%

APPENDIX 3 – RATIOS

PROFITABILITY RATIOS (%)		2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Gross Profit Margin	Gross Profit/Revenues	19,8%	16,9%	19,9%	19,9%	19,9%	19,9%	19,9%	19,9%
EBITDA Margin	EBITDA/Revenues	10,4%	7,0%	11,1%	11,6%	11,8%	11,9%	12,1%	12,3%
Operating Margin (EBIT Margin)	EBIT/Revenues	6,6%	2,5%	5,3%	4,4%	4,5%	4,7%	4,8%	4,9%
Net Profit Margin	Net Income/Revenues	4,5%	1,6%	3,6%	3,0%	3,0%	3,1%	3,2%	3,3%
Return on Equity (ROE)	Net Income/Equity	11,5%	4,3%	8,2%	6,6%	6,9%	7,3%	7,7%	8,0%
Return on Assets (ROA)	Net Income/Assets	2,7%	0,9%	1,5%	1,0%	1,1%	1,1%	1,1%	1,1%
LIQUIDITY RATIOS		2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Current Ratio	Current Assets/Current Liabilities	1,24	1,21	1,18	1,13	1,17	1,21	1,25	1,30
Quick Ratio	(Current Assets - Inventory - Prepaid Expenses)/Current Liabilities	0,94	0,93	0,98	0,97	1,00	1,04	1,08	1,12
LEVERAGE RATIOS		2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Debt Ratio	Debt/Assets	0,42	0,44	0,47	0,51	0,51	0,51	0,51	0,51
Debt-to-Equity Ratio	Debt/Equity	1,81	2,13	2,56	3,25	3,35	3,44	3,53	3,60
Debt-to-EBITDA Ratio	Debt/EBITDA	6,86	11,08	10,26	12,67	12,52	12,36	12,19	12,00
Equity Ratio	Equity/Assets	0,23	0,21	0,18	0,16	0,15	0,15	0,14	0,14
Interest Coverage Ratio	EBIT/Interest Expense	3,51	1,21	1,99	1,28	1,31	1,34	1,37	1,40
EFFICIENCY RATIOS		2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Asset Turnover	Revenues/Assets	0,59	0,57	0,41	0,35	0,35	0,35	0,34	0,34
Current Asset Turnover	Revenues/Current Assets	1,38	1,35	1,00	0,87	0,86	0,84	0,83	0,81
Working Capital Turnover	Revenues/Working Capital	7,07	7,85	6,64	7,48	5,92	4,86	4,09	3,52
Fixed Asset Turnover	Revenue/Fixed Assets	5,41	4,65	3,76	3,01	2,99	2,98	2,96	2,95
Inventory Turnover	Revenues/Inventory	5,68	5,81	6,03	6,03	6,03	6,03	6,03	6,03
Days Inventory Outstanding (DIO)	(Inventory/C.O.S.)*365	80,15	75,65	75,60	75,60	75,60	75,60	75,60	75,60
Payables Turnover	C.O.S./Trade Payables	9,47	11,30	10,53	10,53	10,53	10,53	10,53	10,53
Days Payable Outstanding (DPO)	(AP*365)/C.O.S	38,55	32,30	34,67	34,67	34,67	34,67	34,67	34,67
Receivables Turnover	Revenues/Accounts Receivable	13,30	14,01	14,31	14,31	14,31	14,31	14,31	14,31
Days Sales Outstanding (DSO)	(AR/Revenues)*365	27,45	26,06	25,51	25,51	25,51	25,51	25,51	25,51
Operating Cycle	(365/Inventory Turnover)+(365/Receivables Turnover)	91,76	88,93	86,06	86,06	86,06	86,06	86,06	86,06

APPENDIX 4 – REVENUES FORECAST

	Grand Depression Period													Coronavirus Period	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020F	
Global Auto Sales	71.563.399	68.315.495	65.568.829	74.971.523	78.170.420	82.129.138	85.606.136	88.338.098	89.684.608	93.856.388	95.660.606	95.649.543	91.358.457	73.086.766	
Δ	–	-4,54%	-4,02%	14,34%	4,27%	5,06%	4,23%	3,19%	1,52%	4,65%	1,92%	-0,01%	-4,49%	-20,00%	
Daimler Unit Sales	2.088.973	2.072.876	1.551.291	1.895.432	2.111.106	2.198.029	2.353.623	2.545.985	2.853.014	2.998.386	3.273.933	3.352.415	3.344.951	2.182.502	
% Global Auto Sales	2,92%	3,03%	2,37%	2,53%	2,70%	2,68%	2,75%	2,88%	3,18%	3,19%	3,42%	3,50%	3,66%	2,99%	

(in million)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Revenues	101.569	98.469	78.924	97.761	106.540	114.297	117.982	129.872	149.467	153.261	164.330	167.362	172.745	
Δ	–	-3,05%	-19,85%	23,87%	8,98%	7,28%	3,22%	10,08%	15,09%	2,54%	7,22%	1,85%	3,22%	
			Average	10,69%										

Average Price	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Relation between Daimler Unit Sales and Revenues	47.504	50.876	51.577	50.466	52.000	50.128	51.011	52.389	51.114	50.193	49.923	51.644	
											Average	50735	

(in million)	2020F	2021F	2022F	2023F	2024F	2025F
Revenues	110.730	122.563	135.660	150.156	166.202	183.963
Δ	-35,9%	10,69%	10,69%	10,69%	10,69%	10,69%

	Exponential Smooth					
(in million)	129.335	115.405	127.738	141.388	156.496	173.220
Revenues	-25,13%	-10,77%	10,69%	10,69%	10,69%	10,69%
Δ	-35,9%					

APPENDIX 5 – DISCOUNTED CASH FLOW METHOD

FCFF	2015	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
EBIT	13.176	8.190	14.335	11.117	4.313	6.901	5.109	5.801	6.581	7.457	8.442
Marginal Taxes (%income taxes)	31,67%	48,21%	24,01%	28,48%	29,39%	28,68%	28,68%	28,68%	28,68%	28,68%	28,68%
Taxes on EBIT	4.173	3.948	3.441	3.166	1.268	1.979	1.465	1.664	1.887	2.139	2.421
NOPAT	9.003	4.242	10.894	7.951	3.045	4.922	3.644	4.137	4.693	5.318	6.021
D&A/Imparments	5.384	5.478	5.676	6.305	7.751	7.398	8.259	9.221	10.294	11.493	12.832
CapEx	5.075	8.833	10.158	10.701	10.835	7.637	6.815	7.543	8.349	9.241	10.229
NWC	22.266	24.431	25.230	27.890	29.382	20.655	18.430	20.400	22.580	24.993	27.663
ΔNWC	–	2.165	799	2.660	1.492	-8.727	-2.225	1.969	2.180	2.413	2.671
FCFF	–	-1.278	5.613	895	-1.531	13.409	7.312	3.846	4.458	5.157	5.953
Discount Factor	–	–	–	–	–	1,04	1,08	1,12	1,17	1,22	1,26
Discount Value	–	–	–	–	–	12.925	6.794	3.444	3.849	4.291	4.775

	2020
Debt	146.699
Equity	57.240

Tax Rate	29,3%
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Cost of Equity	2020
sk-Free Rate (Germany 10-Year Bond Yield - 08/09/2020)	0,46%
Market Risk Premium	5,23%
Country Risk Premium	0.00%
Levered Beta	1,80
CAPM (Ke)	9,1%

Cost of Debt	2020
Total Interest Expenses	3.463
Total Debt	146.699
Cost of Debt	2,4%
Cost of Debt (Damodaran)	3,27%
After-tax Cost of Debt (Damodaran)	2,45%

Year	Europe
2019	1,20%
2018	1,75%
2017	1,54%
2016	0,24%
2015	0,03%
2014	0,43%
2013	1,35%
2012	2,50%
g =	1,13%

	(19/09/20)
Share Price	45,48
Nº Shares (in billions)	1.070

WACC	2020
Debt	146.699
Equity	57.240
Debt + Equity	203.939
Weight of Debt	0,72
Weight of Equity	0,28
Cost of Debt	2,36%
Cost of Equity	9,06%
T (Marginal Tax Rate)	29,30%
WACC	3,7%
WACC (Damodaran)	4,4%

Terminal Value	230.267
PV of Terminal Value	184.689
NPV of FCFF	23.153
Enterprise Value	2.073.842
Net Debt	146.699
Equity Value	61.143
Nº of Shares	1.070
Price	57.14
Δ	25.64%

APPENDIX 6 – ADJUSTED PRESENT VALUE METHOD

Base-Case Value				Cost of Equity		9,1%
Year	2020F	2021F	2022F	2023F	2024F	2025F
Discount Period	1	2	3	4	5	6
FCFF	13.409	7.312	3.846	4.458	5.157	5.953
Terminal Value	–	–	–	–	–	75.032
Discount Factor	0,92	0,84	0,77	0,71	0,65	0,59
Present Value (PV)	12.295	6.148	2.964	3.151	3.342	44.581
1 - Total PV	72.481					

Financing Side Effects				Cost of Debt		2,4%
Year	2020F	2021F	2022F	2023F	2024F	2025F
Discount Period	1	2	3	4	5	6
Interest tax shield	1.015	1.171	1.301	1.443	1.597	1.766
Terminal Value	–	–	–	–	–	143.507
Discount Factor	0,98	0,95	0,93	0,91	0,89	0,87
Present Value (PV)	991	1.118	1.213	1.314	1.421	124.761
2 - Total PV	130.819					

1 + 2	203.300
Net Debt	146.699
APV	56.601
Share Price	52,90 €
Δ	16,31%

APPENDIX 7 – MULTIPLES METHOD

Name	Revenue	Mcap	Debt-to-Equity Ratio	Beta	EBITDA Margin
Daimler AG	172.745.000.000	46.790.612.554	2,64	1,60	15,62%
Toyota Motor Corp	252.371.652.063	185.248.177.877	1,04	1,38	13,53%
Volkswagen AG	252.632.000.000	70.298.177.826	1,61	1,45	16,64%
Bayerische Motoren Werke AG	104.210.000.000	39.318.958.863	1,93	1,37	13,04%
Honda Motor Co Ltd	125.899.245.422	38.181.108.394	0,97	1,29	8,54%
General Motors Co	122.423.638.220	36.479.651.858	2,47	1,42	15,11%
Hyundai Motor Co	81.738.675.478	32.927.400.489	1,17	1,35	7,19%
Ford Motor Co	139.072.154.000	22.809.739.962	4,68	1,27	10,92%
Peugeot SA	74.731.000.000	13.405.108.750	0,61	1,71	12,78%
Nissan Motor Co Ltd	83.299.244.882	13.077.306.086	1,95	1,45	7,93%
Porsche Automobil Holding SE	116.000.000	7.526.445.164	0,00	1,44	7,76%
Renault SA	55.537.000.000	6.210.349.007	1,70	1,77	11,64%
Mitsubishi Motors Corp	19.143.115.867	2.957.274.578	0,40	1,63	3,86%
Aston Martin Lagonda Global Holdings PLC	1.159.725.311	1.161.233.448	3,35	2,01	17,71%
		6x Higher/Lower	more debt than equity (<1) or 3x higher	difference of 30% (1,12<1,60<2,08)	+ or - 5%

Peer Group	Enterprise Value	EBITDA	Revenue
Daimler AG	183.023.881.383	26.978.000.000	172.745.000.000
Toyota Motor Corp	392.881.913.486	34.135.125.903	252.371.652.063
Volkswagen AG	212.871.436.335	42.029.000.000	252.632.000.000
Bayerische Motoren Werke AG	136.329.139.424	13.585.000.000	104.210.000.000
General Motors Co	127.178.895.360	18.493.295.860	122.423.638.220

Peer Group	P/E	EV/EBITDA	EV/REVENUE
Daimler AG	19,57	6,78	1,06
Toyota Motor Corp	9,65	11,51	1,56
Volkswagen AG	5,02	5,06	0,84
Bayerische Motoren Werke AG	8,17	10,04	1,31
General Motors Co	6,56	6,88	1,04
	7,35	8,37	1,19

Enterprise Value	–	225.852	204.981
Net Debt	–	133.663	133.663
Equity Value	19.911	92.189	71.318

Price	18,61	86,16	66,65
Target Price (Average)	57,14		
Δ	25,6%		

APPENDIX 8 – DIVIDEND DISCOUNT MODEL

DDM	2015	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
(in millions)	8.424	8.526	10.278	7.249	2.377	3.949	2.891	3.289	3.736	4.240	4.806
Earnings per Share (€)	7.87	7.97	9.84	6.78	2.22	3,69	2,70	3,07	3,49	3,96	4,49
Dividend per Share (€)	3.25	3.25	3.65	3.25	0.90	1,82	1,33	1,52	1,72	1,96	2,22
Perpetuity	–	–	–	–	–	–	–	–	–	–	27,94
Cost of Equity	–	–	–	–	–	1,09	1,19	1,30	1,41	1,54	1,68
Present Value	–	–	–	–	–	1,67	1,12	1,17	1,22	1,27	17,92
Share Price	24,36										
Δ	-46,43%										

AUXILIAR CALCULATIONS:

EPS	2015	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Profit Attributable to Shareholders of Daimler AG	8.424	8.526	10.278	7.249	2.377	3.949	2.891	3.289	3.736	4.240	4.806
Common Shares Outstanding	1.070	1.070	1.070	1.070	1.070	1.070	1.070	1.070	1.070	1.070	1.070
EPS	7,87	7,97	9,61	6,77	2,22	3,69	2,70	3,07	3,49	3,96	4,49

DPS	2015	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F
Total Dividend	3.477	3.477	3.905	3.477	963	1.949	1.427	1.623	1.844	2.092	2.372
Common Shares Outstanding	1.070	1.070	1.070	1.070	1.070	1.070	1.070	1.070	1.070	1.070	1.070
DPS	3,25	3,25	3,65	3,25	0,90	1,82	1,33	1,52	1,72	1,96	2,22

	2015	2016	2017	2018	2019		
Profit Attributable to Shareholders of Daimler AG	8.424	8.526	10.278	7.249	2.377	g Cost of Equity	1,13%
Total Dividend	3.477	3.477	3.905	3.477	963		9,06%
%	41,27%	40,78%	37,99%	47,97%	40,51%		
				Average	41,71%		

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Abbreviations

Forecast – F

Year End – YE

Target Price – TP

Closed Price – CP

Discounted Cash Flow – DCF

Adjusted Present Value – APV

Dividend Discount Model – DDM

Electric Vehicles – EV

Battery Electric Vehicles – BEV

Plug-in Hybrid Electric Vehicle – PHEV

Compliance Management System – CMS

Earnings before Interest & Taxes - EBIT

Earnings before Interest, Taxes, Depreciation & Amortization – EBITDA

Capital Expenditures - CAPEX

Net Working Capital – NWC

Growth Rate – G

Weighted Average Cost of Capital – WACC

Depreciation & Amortizations – D&A

Enterprise Value – EV

Earnings per Share – EPS

Dividends per Share – DPS

Return on Assets – ROA

Return on Equity – ROE

Harmonized Index Consumer Prices – HICP

Tax Rate – T

Risk-Free Rate – R_f